

OBSERVATIONS OF COMETS,

FROM B.C. 611 TO A.D. 1640.

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EXTRACTED FROM THE CHINESE ANNALS.

TRANSLATED, WITH INTRODUCTORY REMARKS,

AND

An Appendix,

COMPRISING THE

TABLES NECESSARY FOR REDUCING CHINESE TIME TO EUROPEAN RECKONING;
AND A CHINESE CELESTIAL ATLAS.

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LONDON:

Printed for the Author

BY

FRANGEWAYS AND WALDEN, CASTLE STREET, LEICESTER SQUARE.

1871.



TO

WILLIAM LASSELL, ESQ. F.R.S.

PRESIDENT,

AND TO THE FELLOWS OF THE ROYAL ASTRONOMICAL SOCIETY,

THIS WORK

IS RESPECTFULLY INSCRIBED.

P R E F A C E.

A FEW years since, when Sig. Schiaparelli announced his discovery of the probable connexion between the orbits of certain Comets and those of the periodical Meteors, the well-known Astronomer, Mr. J. R. Hind, took up the subject, and in the course of his investigation found, among the comets recorded in M. E. Biot's 'Catalogue des Comètes observées en Chine depuis l'an 1230 jusqu'à l'an 1640 de notre ère,' &c., which forms a supplement to the 'Connaissance des Temps' for 1846, one, whose orbit appeared to answer the required conditions. It is that of October 25, 1366, and is No. 295 of the succeeding Catalogue. But the path of that comet, as given by Biot, was apparently so extraordinary, that he was induced to conclude that some error had occurred, either in the original text or in the translation. Thus the comet is described as having appeared near one of the stars in Ursa Major, whence it passed in a south-easterly direction through several of the stellar divisions, until, on October 29, it was in a certain place in Aquarius; but on October 30 it was again in Ursa Major, in the same place as at first: whence it once more pursued a similar south-easterly course to the same place in Aquarius and disappeared.

Mr. Hind consequently applied to me, to know whether this discrepancy could be accounted for by reference to the original text in the Supplement to the 'Encyclopædia' of Ma Twan Lin. Upon carefully examining this, I found that there were really *two* distinct accounts of the course of this comet; the one giving its path through the stellar divisions, and the other describing the asterisms near or through which it passed in that course; and, reading the account according to this version, the whole became perfectly consistent, and Mr. Hind was enabled to bring his investigation to a satisfactory close.

This led to an examination of Biot's Catalogue, and I quickly found, that although very accurate in its details, it was by no means so complete as

could be wished ; many comets being recorded in the 'Encyclopædia' of Ma Twan Lin, and in the great historical work called the 'She Ke,' that are not noticed by him. It therefore appeared to me, that a Catalogue comprising the whole of the observations of the comets contained in the two Chinese works just mentioned, translated from the original, and arranged chronologically, with an explanation of all the particulars connected with them, might be of some service to astronomers, particularly to those engaged in cometary researches.

Such was the origin of the present work ; and as during its compilation many other interesting particulars relating to Chinese astronomy presented themselves, I have been induced to incorporate the principal of them with the Introductory Remarks, which immediately follow.

It was likewise absolutely necessary for the finding the dates, &c. of the various observations, that certain Tables should be constructed, by which Chinese time could be reduced to our reckoning. These will be found in the Appendix, and consist of a complete set of Chronological Tables, giving the succession of the Dynasties and Emperors from the earliest period to the present time ; and of other Tables for finding the Months or Moons, and Days. Instructions for using these Tables are given in the Introductory Remarks, and they will be found of great service, not only to astronomers but also to persons engaged in historical or numismatic investigations, as they will find in them all they require to ascertain the various dates, as far as regards China proper. I have also included in the Appendix a complete Chinese Celestial Atlas, from an original work, so that the names and relative positions of the asterisms and stars can be readily found.

I may also express my conviction that this Catalogue will be found as complete as any that has hitherto appeared, if not more so. It has likewise the advantage of being a work *per se*, and, consequently, will appear in the library or in catalogues as a separate work, and not as forming a portion of any other publication.

INTRODUCTORY REMARKS.

THE progress of Astronomy among the Chinese is a subject of the highest interest, whether it be considered as recording observations of the heavenly bodies made by one of the most ancient and primitive races of mankind, which appears in extremely remote times to have advanced to a high degree of civilisation; peculiar, however, to itself; and which has preserved the manners and customs established by its early rulers, more than two thousand years before the Christian era, in a great measure unaltered to the present day. Or whether the fact that at a period long anterior to the commencement of civilisation among the Western nations, and when (with the exception, perhaps, of the Egyptians and Assyrians) almost universal barbarism prevailed among them, Astronomy had been carried to a great degree of perfection by the Chinese, as manifested by their still existing records, whose authenticity is not only strongly asserted by that people, but is acknowledged by some of the most eminent European scholars of the present day.

In their later records, in addition to a vast amount of valuable historical and other information, we find chapters devoted exclusively to their astronomy: in which are detailed their arrangement and classification of the stars; observations of the sun, moon, and five planets; notices of eclipses, falling stars, and other extraordinary phenomena: among which those of comets, which are extremely numerous, and which frequently are minute in the description of the times and places of their appearance, and of the paths they pursued in the heavens, are perhaps the most interesting to modern astronomers.

As far as my experience goes, it is not easy to find a complete record of these observations in any European language; and if such does exist, it is contained in publications not readily accessible to the general reader. Pingré, in his 'Cométographie,' quotes lists of Chinese comets by Mailla and Gaubil. Mailla's list was taken from the Chinese historical work called 'Tung Keen Kang Muh,' which he translated, and of which I possess a copy, which is occasionally referred to in the following work. That by Gaubil is said by Pingré to have been in MS., and to have been preserved in the library of the Dépôt de la Marine. I have been unable to ascertain whether this MS. is still in existence, or whether, as is highly probable, it was lost in the early days of the French Revolution. Under any circumstances, it does not appear at present to be easily accessible to the general inquirer. The important lists in the 'She Ke' and in the 'Encyclopædia' of Ma Twan Lin do not appear to have been known to Pingré. The Catalogue by M. E. Biot, published in the 'Connaissance des Temps' for 1846,

although very accurate, is by no means so complete as could be wished, many observations of comets being passed over without notice.

The remarks which follow are intended to supply certain desiderata, which appear to be essential to the full comprehension of the observations which form the subject of this work. They consist principally of,—

Firstly, A brief account of the early astronomy of the Chinese, extracted entirely from original sources, chiefly historical.

Secondly, An explanation of the means to be employed in reducing Chinese time to our reckoning, including all particulars relating to the dates of the Emperors who were reigning when the comets described appeared, such as the years of their reigns and epochs; and the dates of the Moons or Months, and Days referred to in the descriptions, and an explanation of so much of the Chinese calendar as may be needed for the understanding the mode of their reduction ; together with the requisite Tables for that purpose.

Thirdly, An explanation of the astronomical portion of the observations, showing the mode of ascertaining the various asterisms and stars mentioned as occurring in the paths of the comets, as they are described in the Chinese lists and maps of stars, with other particulars relating to them necessary to be noticed.

Fourthly, An explanation of the plan followed in the translation and arrangement of these observations.

These, it is confidently hoped, will render the work intelligible to the general reader.

According to Chinese tradition, the introduction of astronomical observations is to be attributed to Shin Nung, the immediate successor to Fuh He, the founder of the empire. The reign of Shin Nung commenced about B.C. 3253.

It is also related that the Emperor Hwang Te, B.C. 2698-2598, was the monarch who introduced the system of reckoning their chronology by the cycle of 60 years, which he regulated by means of two series of characters; the one of 10, the other of 12 characters, called, from the first of each series, Kea Tsze. This system is in use to the present day, and will be fully explained in a subsequent page. The year of the introduction of the cycle is the starting-point of Chinese chronology; and I may observe that the present cycle is reckoned by the Chinese as the 76th, the first year of which was A.D. 1864. It therefore follows, that in 1863 the 75th cycle was completed : consequently $75 \times 60 = 4500$, the number of years then elapsed from the first year of the first cycle; and $4500 - 1863 = 2637$, the date B.C. of that year, which is said to have been the 60th year of Hwang Te. He is also considered as the inventor or discoverer of the lunar cycle of 19 years, by which the return of the conjunctions and oppositions of the sun and moon can be calculated, and the intercalary moons regulated. Hence it should appear that the lunar cycle of 19 years, introduced among the Greeks, many ages after, by Meton, was known to the Chinese more than 2000 years before that astronomer was born. These are mentioned merely as Chinese traditions, and not as resting on any other authority.

In the Chinese annals it is recorded, that in the reign of Chuen Kuh, the grandson of Hwang Te, in the spring of the year, on the first day of the first moon, a conjunction

of the five planets occurred in the heavens, in Ying Shih. Ying Shih, or, as it is more usually denominated, Shih, is one of the 28 stellar divisions, determined by α , β , and other stars in Pegasus, extending north and south from Cygnus to Piscis Australis, and east and west 17 degrees, and comprising parts of our signs Capricornus and Aquarius. The Emperor Chuen Kuh is said to have reigned 78 years, from b.c. 2513-2436, and to have died in his 97th year; and from modern computations (I believe, by Bailly the French astronomer) it has been asserted that a conjunction of the five planets actually did take place about the time and within the limits indicated, i.e. on the 29th of February, 2449 b.c., being the 65th year of Chuen Kuh. Should this, on further investigation, prove correct, it will afford a strong presumption of the authenticity of the early Chinese annals, as there is no appearance of their astronomers having been at any time able to compute the places of the planets so far back; and the account is found in works published long before any intercourse with Europeans had taken place.

The next notice of Chinese astronomy appears in the 'Shoo King,' one of their five classical works, which is considered by the Chinese as the most ancient of their books. We have it as revised by Confucius, about the sixth century before our era. It was even then considered as of extremely remote antiquity, and from the peculiarities of the style of the early portions of that work there is but little doubt of such being the fact. Not only do the Chinese themselves assert its authenticity, but many of the best European scholars believe it to be genuine. Among these, Father Gaubil expresses no doubt of that fact; and M. J. B. Biot, in his account of Chinese astronomy, informs us that M. Stanislas Julien, without doubt the most accomplished Sinologist in Europe, has expressed the same opinion, which he derives from internal evidence, founded on its peculiar archaic style and construction. On examination, it appears to be rather a collection of historical documents of different ages than a continuous history, and may be considered as being quite as much to be relied upon as any of the histories of ancient nations that have descended to us.

The first section of the 'Shoo King' is called Yaou Teen, and records the actions of the Emperor Yaou. According to the Chinese authorities, this prince ascended the throne in the 41st year of the 5th cycle of 60 years. It has just been shown, that the reckoning by cycles commences with the year b.c. 2637. Four cycles of 60 years will be 240 years, and 41 years of another cycle will make 281; consequently 2637 less 281 will give 2356 for the first year of Yaou.

In the first section of the 'Shoo King,' just mentioned, in the paragraphs 3 to 8 inclusive, the instructions of Yaou to his astronomers, under the designations of He and Ho, are given. These names, He and Ho, are possibly not those of individuals but of two families, under whose superintendence the arrangement of the calendar for the year, and the making the necessary observations and the requisite computations, were placed, and whose office, in accordance with Oriental custom, was probably hereditary. These instructions are of great interest, as being probably the earliest relating to astronomy on record; and a summary of them will, therefore, not be out of place here. It must also be observed, that these paragraphs have each a commentary of far more recent date; without which, such is the abstruseness of their style, there would be great difficulty in understanding them.

In the first of these paragraphs Yaou is described as commanding He and Ho 'to observe the heavens, to compute the calendar, to form an instrument by which the motions of the Sun, Moon, and twelve signs might be represented, and with due respect to impart information respecting the seasons to the people.'

The comment on this paragraph is worthy of attention. In it we are informed that one of the words employed (*Leih*) signifies the recorded observations or computations. Another (*Seang*) refers to an instrument, probably resembling our armillary sphere. It is also stated that the Sun represents the male, or superior principle of nature, and the Moon the female, or inferior principle; that the Sun passes round the Earth in one day, and that the Moon is every lunation in conjunction with the Sun; that the word *Sing*, or stars, indicates not only the 28 stellar divisions, but also the five planets, Mercury, Venus, Mars, Jupiter, and Saturn; and the commentator fancifully compares the heavens to a piece of cloth in the loom, the stars forming the warp and the planets the woof: thus not inaptly indicating the paths of the planets among the fixed stars. Another word (*Shin*) is explained as signifying the twelve places in which the sun and moon are in conjunction: thus, in some measure, answering to our twelve signs. This may serve to give some notion of Chinese astronomy in those early times, and also to show the general nature of the commentary.

In the second paragraph Yaou establishes a division of the duties, and orders Ho Chung (or, as he may be called, He the Second) to go to a certain place in the East. He directs him to receive the rising Sun with due respect (that is, to perform the ceremonies necessary for that purpose), and to arrange the business of the spring. He was to observe whether the days and nights were at that time of equal length. A certain star (*Neaou*) is mentioned as being the correct indicator of the season, and certain tests are named as showing the middle of spring. There are the people going abroad on agricultural business and the pairing of birds and beasts.

The Commentator informs us, that 'after the completion of the Calendar a division of the duties took place, in order that certain observations might be made to verify the computations, lest inadvertently some error might have been introduced. These form the subject of this and the three succeeding paragraphs.' He also observes, 'Some suppose that these particular instructions were given to the second and third brothers of He and Ho, while others are of opinion that He and Ho are official denominations, and not the names of individuals, and that the others were assistants of different grades: which opinion is correct,' says he, 'cannot now be rightly ascertained.' The duties to be performed in this verification are distinctly named, and the star 'Neaou Bird' is said to refer to a star in one of the seven stellar divisions of the southern quarter, denominated that of the 'Red Bird.' He also informs us, that 'by a Chinese astronomer named Tang Yih Hing the star Neaou is considered to be the same as the zodiacal division Shun Ho, "the Quail-fire." This star appears to be identical with α or Cor Hydræ, which is the central star of that division, and which is said to have culminated at sunset on the day of the vernal equinox in the time of Yaou.'

Now if α Hydræ were observed culminating at sunset on the day mentioned, the Sun must have been in our sign Taurus, or in the Chinese division Maou, determined by the Pleiades; which was, consequently, then the equinoctial point. Reckoning from the

middle of that constellation (the Pleiades), we find it may be roughly estimated as being, at the present time, rather more than 58 degrees from the equinoctial point—say 58 degrees. Now the precession of the equinoxes being at the rate of about a degree in 72 years, by multiplying 72 by 58 we obtain 4176 years as having elapsed since the time of Yaou to A.D. 1870, and 4176 less 1870 will be equal to 2306 B.C. as the date of the observation. It has been before shown, that the reign of Yaou commenced in the year 2356 B.C. He is said to have reigned 100 years, and 2356 less 2306, the number just found, will give the 50th year of that reign. This may be considered sufficiently near for a rough computation like the present, and thus a strong presumptive proof is again afforded of the veracity of Chinese history as recorded in the ‘Shoo King.’

In the third paragraph Yaou directs He Shuh, or He the Third, to go to a place in the South. He is there to observe, with due ceremony, the length of the Sun’s shadow, and thus to ascertain the middle of summer. Another star (Ho) is mentioned as indicating that period, and the tests are, the people still more actively engaged in agriculture, the moulting of birds, and the change of the fur in animals. This evidently refers to the observation of the summer solstice by means of the shadow of the gnomon. The star Ho, or Ta Ho, is the central one of the seven stellar divisions of the western quarter, that of the ‘Azure Dragon,’ and is identical with β in Scorpio.

The fourth paragraph contains the instructions to Ho Chung, or Ho the Second. He is directed to proceed to the West, and respectfully to escort the departing Sun. The days and nights are again equal. The star (Heu) is mentioned as the indicator of the season, and the tests are the people resting from their labours, the birds being well fledged, and the beasts having sleek coats. The star Heu is the central one of the seven stellar divisions comprised in the northern quarter, that of the ‘Black Warrior,’ and is identical with β Aquarii.

In the fifth paragraph Ho Shuh, or Ho the Third, is commanded to go to the North, to observe the northern changes. The day is then at the shortest, and the stars Maou are mentioned as those by which the winter solstice may be correctly ascertained. The tests are, the people keeping themselves within-doors and the birds and beasts having their winter covering of down and hair.

The stars Maou form the central one of the seven stellar divisions of the eastern quarter, that of the ‘White Tiger,’ and answer to the Pleiades. I may here observe, that the stars mentioned as the indicators of the seasons are about six hours of R. A. apart from each other: thus affording another presumptive proof of the accuracy of the early Chinese astronomical observations. The stellar divisions and the four quarters mentioned will be fully explained in a subsequent part of this work.

In the sixth paragraph Yaou thus addresses his astronomers:—‘He and Ho, ye know that a year has 366 days. Fix the intercalary moons, regulate the hundred offices, and all things will prosper.’

The Commentator upon this paragraph informs us, that the year of 366 days mentioned by Yaou is that of the revolution of the heavens, and that the length of the solar year is 365 $\frac{1}{4}$ days. He minutely describes the various computations needed for ascertaining the exact length of the year, with many other particulars of interest, but which can hardly be entered into here.

Such is the substance of these curious notices of early Chinese astronomy, perhaps the most ancient on record. It must, however, be borne in mind, that the correctness of this account depends entirely upon the degree of credence to be given to the 'Shoo King.' Assuming its authenticity, of which there can be but little doubt, we find that at a very remote period, *i. e.* between two and three thousand years before the Christian era, the Chinese had made great progress in astronomy, that they were acquainted with the true length of the year, that they observed the equinoxes and solstices, that they had discovered the necessity of frequent intercalations of months, or months, to keep the seasons in their true places, and were able to perform the computations requisite for that purpose; together with many other facts, proving the high degree of knowledge of astronomy to which they had attained.

The second section of the 'Shoo King,' called 'Shun Tsoo,' is devoted to the actions of the Emperor Shun, the successor of Yuoo. In this the following curious passage occurs:—'He examined the Tsenon Ke and the Yuh Hang, that the seven Ching might be duly regulated or observed.' The Tsenon Ke was the instrument before mentioned as resembling our armillary sphere; it is described as having been enriched with pearls, and the Yuh Hang appears to have been a kind of quadrant, having a jewelled tube fixed transversely. The seven Ching are the Sun, Moon, and five planets. There is a very full commentary upon this passage, occupying nearly four pages. The object of this examination by Shun is said to have been that he might ascertain whether the instruments were in order, so as to enable correct observations of the heavenly bodies to be made; which observations were required in the computation of the Calendar. There are some curious passages in this Commentary relating to the theories of the heavens, and many other particulars, explaining the construction and use of the before-mentioned instruments. There is also a description of one made upon the ancient principles, about A.D. 450, in which the tube is said to have been 8 cubits in length and 1 inch in diameter. In this both these instruments were combined in one, and the tube being fixed to one of the circles of the sphere, which was movable, it could be turned about, and the positions of the Sun, Moon, and other heavenly bodies, could be ascertained by looking through it.

There are many other allusions to astronomy in this very ancient book, the 'Shoo King.' The eclipse described by me in the 'Monthly Notices,' vol. xxii. p. 258, which occurred in the year 2158 B.C., is there recorded.

In other early books of the Chinese, astronomical notices occur. In the 'She King,' a collection of ancient poems, selected and arranged in their present form by the celebrated Confucius, comets and the stellar divisions are alluded to. In the 'Chiu Tsoo,' a work written by Confucius, the eclipses of which I have given an account in the 'Monthly Notices,' vol. xxiv. p. 39, are recorded. In the 'Tso Chuen,' another ancient historical work, there are many astronomical notices; and in the 'Urh Ya,' a kind of dictionary of terms, even then considered of high antiquity, compiled during the Chow dynasty, *i. e.* between B.C. 1122 and 314, the twelve Kung, or zodiacal signs, and many of the stellar divisions, are mentioned. The great historical work, the 'She Kr,' which commences with Hwang Te, about 2650 B.C., and to which I am indebted for a large proportion of the observations of comets detailed in the subsequent pages of this volume,

is highly deserving of notice. This truly great work was commenced by the historian Sze Ma Tseen. He brings the history of China down to the year 97 B.C., and it has been continued by a succession of historians to the end of the Ming dynasty, A.D. 1644. In this work certain sections are devoted exclusively to astronomy; and these, of course, in the present investigation, are the most important. In these, among other interesting matters, are to be found observations of the Sun, Moon, and five planets; occultations of stars; and notices of extraordinary appearances in the heavens, among which comets hold an important place.

Astronomical notices also occur in many other historical and scientific works, among which the accounts of comets in the celebrated 'Encyclopædia' of Ma Twan Lin must be particularly mentioned. It is only recently I have obtained a sight of this important work, for which I am indebted to the Rev. J. Summers, Professor of Chinese in King's College, London, who has kindly favoured me with the loan of the volume containing the cometary observations; and has thus enabled me to render my list far more complete, both as to details and number, than it otherwise would have been. Ma Twan Lin flourished during the later Sung dynasty, A.D. 960-1279. His laborious compilation of the Encyclopædia bearing his name is looked upon by the Chinese as one of the most extraordinary works ever produced by man. It is much admired by them for the immense amount of information it contains, and for the elegance and perspicuity of its style. The volume I have just referred to contains notices of comets from B.C. 613 to A.D. 1222, shortly after which date the author appears to have died. A Supplement, bringing the work down to A.D. 1644, has since been published, containing the cometary observations from the death of Ma Twan Lin to that date. Of this I had previously seen a copy, and made the necessary extracts.

The 'Tung Keen Kang Muh,' an abridgment of Chinese history from the earliest times to the end of the Yuon dynasty, A.D. 1367, in 100 volumes, is another work containing brief accounts of comets, some of which are not found in the 'She Ke.' It has been translated into French by M. Mailla.

Various works, professedly on astronomy, also occur, from one of which the Chinese Celestial Atlas, hereafter to be noticed, has been copied. In one of these works, printed in 1652, there is a list of 155 of the most important treatises on astronomy then existing in China. These afford another proof of the great attention paid by the Chinese to that science. It must, however, be observed, that astrology is almost universally coupled with astronomy by that people.

Such is a very brief summary of the state of astronomy among the Chinese. As we proceed, other portions of the subject will be touched upon and explained. It is chiefly from the works just mentioned, and more particularly from the 'She Ke' and the 'Encyclopædia' of Ma Twan Lin, that the observations of comets, that form the subject of the present compilation, have been derived; and it may be observed, that the materials thus collected consist of observations of comets made under the various dynasties from the period of the Chun Tsew, B.C. 613 to A.D. 1640: shortly after which time the Ming dynasty was subverted by the present reigning one, the Tsing.

They commence with B.C. 613, that being the year in which the cometary observations of Ma Twan Lin begin. The observations of comets earlier than this are

not only very few, but are also so vague and unsatisfactory in their details, that it was thought advisable to omit them altogether.

The number of observations of comets thus brought together amounts to 373. Some of these may possibly be meteors, and may consequently be rejected on future revision. M. E. Biot, in the Supplement to the 'Connaissance des Temps' for 1846, has published a catalogue of comets observed in China under the following heads: -

Those from A.D. 1230 to 1649, of which he notices	94
Those from B.C. 134 to A.D. 1203	64
Those near oppositions of Halley's Comet	66
Making a total of	224

It appears, therefore, that the list of cometary observations in the present work contains 149 more than Biot's catalogue.

The translation is as literal as the idiom of the two languages would allow, and every care has been taken to make it as accurate as possible. It must, however, be observed, that no attempt has been made to translate the names of the Chinese asterisms, as no useful purpose would be answered by it; and to give the meaning of a few and not of the whole would tend to introduce confusion in the narrative. The original names have, therefore, been everywhere retained. It may also be remarked that the Chinese names are quite as fanciful as our own. Thus, Canopus is called Lao-n Chin, 'the Old Man'; Arcturus, Ta Kee, 'the Great Horn'; the seven bright stars in Ursa Major, Pi-h Tow, 'the Northern Measure'; and the stellar division in which our constellation Gemini occurs is called Tsing, 'the Well.' These and other Chinese words will be found in the English version of the text untranslated: they are, however, in every instance, fully explained beneath the text. They have been so placed, not only for the convenience of classification, but also as enabling explanatory remarks to be introduced where necessary.

The manner in which these observations are recorded in the original is more or less explicit. In some we have merely the dynasty, emperor, year, and month, the others, the day and place of the heavens in which the comet was seen are added, and in those which are the most fully described we have, in addition to the particulars before mentioned, the path of the comet through the heavens: comprising the stellar division in which it was seen, the asterisms through which it passed, and the stars near to which it approached; together with the various days on which it was observed and the length of time it was visible, its colour, the length and direction of the tail, and other circumstances considered worthy of notice.

The description may, therefore, be considered as divided into two general heads: the one chronological, the other astronomical. In the chronological part we have to ascertain all particulars respecting the dates of the dynasty, the emperor, the epoch and its year, the moon or month, and the day on which the comet appeared, and the days subsequently mentioned until its final disappearance. In the astronomical part we have, in like manner, to ascertain the stellar division in which the comet was first seen,

and those through which it subsequently passed; and the various asterisms and stars mentioned as being in its path. To these must be added the description of the appearance of the comet, as regards colour, length of tail, &c.

For the first of these objects, viz. the ascertaining the various dates mentioned, it has been found necessary to construct several Tables. The first portion of these consists of a complete set of Chronological Tables, in which are to be found the succession of the Emperors from the earliest times, the dates of their accession to the throne, and the duration of their epochs and reigns, reduced to our reckoning. These Tables comprise the whole of the dynasties considered as regular by the Chinese, in their succession from the most remote period to the present time, with the names of the Emperors and of the epochs adopted by them. These are arranged in columns. The names of the Emperors and epochs are given in the original characters, with the pronunciation in English; together with the date of the commencement and duration of each epoch and reign. To these are added Tables of the Minor Dynasties, with the names of their princes and epochs as far as could be ascertained. The whole from original sources.

In forming these Tables, valuable assistance has been obtained from a chronological work compiled by the Japanese Prince of Mito, and published in Japan about 1863; in which not only is the chronology both of Japan and China given from the earliest times to A.D. 1860, but also the corresponding dates B.C. and A.D., according to our mode of expressing them. This work affords much valuable information, and deserves great praise for the perspicuity of its arrangement and the able manner in which it has been carried out. I need scarcely say the work is in Japanese; but the characters being the same as the Chinese, and as, although differing phonetically, they have precisely the same meaning, there was, therefore, no difficulty in making them out. The title in Chinese reads, 'Sin Chuen Noon Peaou,—A newly compiled Guide to Years,' or Chronology.

The word Epoch having been frequently used, it may be necessary to explain what is meant by that term. In this and the succeeding pages, the word Epoch is employed to designate the appellation of the years of the Emperor's reign. The term is not strictly correct, the Chinese equivalent being 'Neen Haou,—The Years' Name,' or designation; but it is the nearest I could adopt. It is now about 2000 years since it has been the custom of the Chinese Emperors to assume certain adulatory titles to express the years of their reign; and it is by those titles these personages are designated by the people at large and by strangers. The true name of the Emperor is never mentioned, as it would be considered as highly insulting to him to do so. Upon his death another name is given him, by which he is hereafter to be known in history. This is called his Temple name, being that placed in the Temple of Ancestors. It follows, therefore, that Kang Ho, Keen Lung, Taou Kwang, are not the names of the Emperors thus usually designated, but only the appellations of the years of their respective reigns; and in history they are only known as Shin Tsoo, Kaou Tsung, and Tseuen Tsung. It was formerly customary to change the epoch several times during a reign, and we have one instance in the early part of the Han dynasty of 11 such changes in a reign of 54 years; and under the Tang dynasty there are no fewer than 14 changes in a reign of 34 years. From the accession of the Ming dynasty, A.D. 1368, to the present, excepting in one instance, no change has been made in the epoch during the reigns of any of the

Emperors, that assumed at the accession having been kept until the close of the reign. These circumstances render the study of Chinese history a matter of some difficulty at the first, and hence the value of accurate tables in any investigations involving dates.

In using these Tables, the dynasty having been ascertained, the names of the Emperors of that dynasty and of their epochs, with their dates, will be found in their respective columns. For example: Required the 3rd year of the Epoch Woo Fung, of the Emperor Seuen Te, of the Western Han dynasty. On reference it will be found that Seuen Te was the eighth emperor of that dynasty; that he reigned 25 years, from B.C. 73-49; that Woo Fung was his 5th epoch, extending from B.C. 57-54: consequently its 3rd year was B.C. 55. Again, Tang dynasty: Required the 2nd year of the Epoch Han Hang, of the Emperor Kaou Tsung. On reference it will be found that Kaou Tsung was the third emperor of that dynasty, who reigned 34 years, from A.D. 650-683, and that Han Hang was his 7th epoch, from A.D. 670-673. The 2nd year of the Epoch Han Hang was, therefore, 671. It will be seen from these examples, that these Tables give all the information required for ascertaining the date of any year, according to our reckoning, that may occur in Chinese history.

Having thus ascertained the year, we have next to find the moon, or month, and the day of the year, on which a comet appeared, or any other remarkable circumstance occurred. For understanding the method of computing these, some acquaintance with the Chinese Calendar is required.

The Chinese year is luni-solar, and is reckoned by lunations, or moons as they term them; which may be considered as answering to our months, and of which 12 make up the ordinary year. These moons are of 29 or 30 days, regulated by certain fixed rules. They, however, are not alternate, and the common year consists of but 354 or 355 days. Hence the necessity of frequent intercalary moons at short intervals, there being seven of these moons in the cycle of 19 years, and consequently they fall generally between every second and third year. The year thus increased consists of 384 or 385 days; and in this manner the deficiencies of former years are made up, and the seasons kept in their proper places. This mode of intercalation appears to have been practised from extremely remote antiquity, as it is mentioned, as I have before shown, in the instructions of Yaou to his astronomers, more than 2000 years before the Christian era.

The succession of the moons in any one year is regulated by the first day of that year, which is not a fixed day, as with us, but, like our Easter Sunday, is not the same for two consecutive years. The first day of the Chinese year is the first day of the lunation in which the Sun enters our sign Pisces: it may, therefore, be any day between January 22 and February 20 inclusive. Hence it follows that this first day of the year must, of necessity, be ascertained before the moons can be properly appropriated. For this purpose the lunar cycle of 19 years must be employed; and a Table of the first year of each of these cycles, from B.C. 609 to A.D. 1995, has been constructed: as also another Table, showing the first day of each lunation in every year of the 19-year cycle. These Tables are formed from those in 'L'Art de Vérifier les Dates.' In order to use them, we must find in the first of these Tables the number of the given year in the 19-year cycle in which it occurs, and against that number in the second Table will be found approximately the first day of each lunation in that year. For example: Let it be

required to find the 1st day of the 6th moon in the year A.D. 678. In the Table of the first years of cycles, 684 is the nearest below that number, consequently 698 is the 15th year of that cycle; and in the second Table it will be found that the 1st day of the 1st moon in the 15th year of the cycle is February 17, and the 1st day of the 6th moon July 15, the day required. Again: Required the 1st day of the 10th moon, A.D. 1448. Here 1444 is the 1st year of the cycle in which 1448 occurs, of which it is the 5th year, the 1st moon of which commences February 7; and the 1st day of the 10th moon is September 2. It must, however, be observed, that these Tables must be considered as approximate only: they are, however, sufficiently accurate for the purpose required. It must also be remarked, that the earliest date on which the first day of the Chinese year can fall is January 22; and whenever the second lunation in the Table commences in February, after the 20th, the lunation commencing in January is to be taken as the first of that year, and the succeeding moons reckoned accordingly. Thus, in the 14th year of the cycle of 19 years the lunations commence with January 30, February 28, &c.: in this case January 30 is the first day of the Chinese year. In the 11th year the moons are January 3, February 2, &c. Here the first day is February 2.

The mode of reducing Chinese days to our reckoning is the next point to be considered. In order to comprehend this it is necessary, first, to explain the principles of the system by which the Chinese arrange their chronology. They reckon by means of periods, or cycles, of 60 years; the years in these cycles being regulated by means of the combinations of two series of characters, the one of 10 the other of 12.

The following Table shows these characters in the order in which they occur:—

FIRST SERIES, 10.		SECOND SERIES, 12.
甲 Kea		子 Tsze
乙 Yih		丑 Chow
丙 Ping		寅 Yin
丁 Ting		卯 Maou
戊 Woo		辰 Shin
己 Ke		巳 Sze
庚 Kang		午 Woo
辛 Sin		未 We
壬 Jin		申 Shin
癸 Kwei		酉 Yew
		戌 Seuh
		亥 Hae

This system is called Kea Tsze, from the names of the first characters in each series. It is said to have been first introduced by the Emperor Hwang Te, the first year of the first cycle being reckoned as the 61st of that emperor's reign, answering to B.C. 2637. Whether this statement be correct or not this is certain, the system has been in use from extremely remote antiquity, and is employed in all their historical works, however early, to express the various dates that occur in them.*

They are employed thus:—The characters in the first series are combined with those in the second, from the first to the tenth, in this manner,—Kea Tsze, Yih Chow, &c. to Kwei Yew. The first character in the first series is now combined with the eleventh of the second, Kea Seuh; and the second of the first with the twelfth of the second, Yih Hae; and the other combinations follow in due order. Proceeding thus, after sixty combinations, the last being Kwei Hae, the first characters in both series come together again, and a fresh cycle commences, the combinations of the characters following in the same order as before. This system is employed not only to express the years of the cycle, but also months, days, and hours. It is also applied to the points of the compass, and any other expression of numbers in a series of ten or twelve.

The Chinese days of the year are not reckoned, as among us, by weeks of seven days, each day having a definite name, but by cycles of 60 days, the characters of which are the same as those of the cycle of 60 years. The names of the days also are the same as those of the combinations of the Kea Tsze.

The ordinary year consists of six of these cycles of 60 days, making 360 days; consequently they fall short of the true number of days in the year—in common years by 5 and in leap years by 6 days. Hence there is a continual shifting of the characters for any particular day. If, however, the characters for a certain day in any one of our years—say January 1, 1860—are known, the characters for any other day in that year are easily ascertained. The characters for the 1st of January in any year are to be found by means of a Table, whose construction I will now explain. I have just remarked, that the reckoning of the days of the year by periods of 60 days, according to the Chinese method, falls short of the true year by 5 days in common and by 6 days in leap years. Hence it follows, that in the cycles of 60 days the characters for the 1st of January in any year being known, those for the same day in the succeeding year will be five in advance; unless it should be leap year, when they will be six in advance. Let us assume the characters for the 1st of January, 1860, to be those of the first of the cycle, Kea Tsze; those for 1861 will be Ke Sze, the sixth combination; those for the same day in 1862 will be Kea Seuh, the eleventh combination; those for 1863, Ke Maou, the sixteenth; and those for 1864, a leap year, Yih Yew, the twenty-second: the first three being five in advance and the last six. Proceeding thus, taking every fifth combination for common years and every sixth for leap years, we shall find, after eighty combinations, on the eighty-first the first combination, Kea Tsze, will recur, followed by the succeeding ones in precisely the same order as before; and thus a

* The whole of the Tables referred to in this and the succeeding pages will be found in the Appendix.

general Table will be formed, showing the characters for the 1st of January for 80 years. In the Table the combinations are numbered from 1 to 80, for the convenience of reckoning. It must also be observed, that the Julian reckoning is that to be employed in reducing Chinese time.

In order to find by this Table the characters for the 1st of January in any given year, a second or auxiliary Table is required. In this the year of the commencement of each period of 80 years, from B.C. 2561-1920, is given. They are arranged under the letters B.C. and A.D. For years A.D. subtract from the given year the next lower number in this second Table, and against the number thus ascertained the characters for the 1st of January in that year will be found. A few examples will render this clear :—

Required the characters for January 1, A.D. 943.

943 — 880 (the next lower number in the second Table) = 63. Against No. 63 in the 80-year Table are Jin Yin, the characters required.

Required the characters for January 1, A.D. 1396.

1396 — 1360 (the next lower number) = 36; against which are Kang Shin, the characters required.

Required the characters for January 1, A.D. 1868.

1868 — 1840 = 28; against which are Woo Seuh, those required.

To exemplify the correctness of these results, I may observe that Gaubil informs us that the characters for January 1, A.D. 1267, were Kwei Hae.

1267 — 1200 = 67; against which are Kwei Hae.

And again, that those for January 1, A.D. 638, were Sin Yew.

638 — 560 = 78; against which are Sin Yew.

For years B.C. the process differs slightly. Here we have to subtract the given year from the next higher number, and proceed as before.

Required the characters for January 1, B.C. 643.

721 (the next higher number) — 643 = 78; against which are Sin Yew, the characters required.

Required the characters for January 1, B.C. 279.

321 — 279 = 42; against which are Jin Sze, those required.

To exemplify this, Idler informs us that the characters for January 1, B.C. 198, were Ting Sze.

241 — 198 = 43; against which are Ting Sze.

Such is the extremely simple method to be pursued to find the characters for our 1st of January in any given year, B.C. or A.D. To find the days mentioned in the account of any occurrence or phenomenon, such as the appearance of a comet, &c., we must return to the Table of 60 days.

It has already been shown, that the first combination in that Table recurs on the 1st, and commences a new cycle, either of years or days, as the case may be. Hence it is evident, that the characters for January 1 in any year must recur on the first day of

each subsequent period of 60 days, and, therefore, that in common years the characters for March 2, May 1, June 30, August 29, October 28, and December 27, being the first days of each period, must be the same as those for January 1. In leap years they occur on March 1, April 30, June 29, August 28, October 27, and December 26. It follows then, that the characters for January 1 in any year being known, those for any other day in the same year can be easily ascertained. For this we must proceed in the following manner — Having by the methods before mentioned found the month according to our reckoning, answering to the Chinese moon in which the given day occurs, we must then ascertain within which of the dates just mentioned are those of the recurrence of the characters for January 1 it is to be found. Let us suppose the day required to be one in the month answering to our month of July, it will then fall between June 30 and August 29. In this case June 30 answers the characters for January 1, and now, by counting on from that combination in the Table of 60 days, commencing with its date June 30, until we arrive at the characters of the day required, we obtain the date of that day. For example —

Required the day Sin Chow, in the 7th moon, A.D. 365. We have first to find January 1, thus, $365 - 320 = 45$, against which we shall find in the 80 year Table Woo Shin (5), the character for January 1. 365 is the 5th year of the lunar cycle, in which year the 7th moon commences August 1. The 60 day cycle, in which this date occurs, commences June 30, which is consequently Woo Shin (6). Call this June 30, and count on to Sin Chow (8) in the 60 day Table, and the date will answer to August 2, which is that required. The small figures in brackets refer to those after the Chinese combinations of characters in the 80 year Table, and also their numbers in the 60 day Table. Thus, Woo Shin is the 5th and Sin Chow the 38th in that Table. These numbers greatly facilitate the finding the required characters in the 60 year Table.

The following example will, I trust, fully exemplify the nature of the computations requisite in reducing Chinese time to European reckoning. It is a copy of one of the observations of comets recorded in the subsequent part of this volume.

It is stated that during the Sung dynasty, in the reign of the Emperor Lo Tsung, in the 5th year of the epoch King Ting, the 7th moon, on the day Keu Seuh, a comet appeared. It was also observed on the days Ko Maou, Sin Hsé, Woo Woo, Keu Tso, and Sin Wei, when it disappeared.

On reference to the Chronological Tables it will be found, that the Sung dynasty ruled China from A.D. 960-1279. Lo Tsung was the fourteenth emperor of that dynasty, and reigned from 1225-1264. King Ting was his eighth epoch, 1260-1264, the fifth year of which was 1264, the year required. To find the characters for January 1 in that year $1264 - 1200 = 64$, against which, in the 80 year Table, will be found Ting Wei (4), which are, consequently, the characters for January 1. 1264 is the 11th year of a cycle of 19 years. The 7th moon in that year of the cycle commences towards the end of July, in which case the nearest preceding date on which the characters for January 1 occur is June 29, 1264 being a leap year. Now count on from Ting Wei (4), June 29, to Keu Seuh (1), which will be found to be July 31, thence to Sin Hsé (2), August 2, thence to Ko Maou (3), September 8, to Keu Tso (1), September 14, and to Sin Wei (2), September 21, on which day the comet disappeared.

Having thus explained the mode of reducing the various dates occurring in these observations to European reckoning, I pass on to the second, or Astronomical division of the subject, in which we have to consider the manner in which the place of the comet and its course among the stars are to be ascertained. For understanding this, it will be necessary to give a brief summary of some of the principles of Chinese astronomy.

The Chinese divide the visible heavens into 31 portions, 28 of those may be termed the stellar divisions, and receive their names from, or are determined by, an asterism, generally forming the central or principal one of the division. The determination by an asterism having the same name has been preferred by me to that by any particular star in that asterism, as being, to the best of my judgment, more in accordance with the Chinese mode of proceeding, in which, as far as my experience goes, the asterism alone is mentioned, and not a determining star in that asterism. Various other asterisms make up the remainder of the divisions. These divisions are very irregular in their extent, both from north to south and from east to west, no two being alike in these particulars, the largest extending north and south from Parsons to Argo, and east and west $32^{\circ} 49'$, while the smallest consists only of the few small stars in the head of Orion and of some other small stars in the immediate neighbourhood, extending from east to west but $24'$.

In the Appendix will be found a Table of the 28 stellar divisions, their determining asterisms, and their extent north and south, and east and west.

In addition to these divisions there are three large spaces, denominated Yuon, a word signifying a wall, or enclosure. These are, Two Wei Yuon, which may be considered as comprising stars within the circle of perpetual apparition, Tien She Yuon, consisting of stars contained within a line drawn through the constellation Scorpis and continued to the circle of perpetual apparition, thus comprising the upper part of Ophiuchus, Hercules, Corona Borealis, and some stars in Bootes, Aquila, and Taurus Poniatowski. The third space is called Tao Wei Yuon, this is contained within a line drawn through β , γ , δ , ϵ and others in Virgo, and β , σ , ι , θ and δ Leonis, and continued, as in the preceding instance, to the circle of perpetual apparition, thus comprising stars in Virgo and Leo, Coma Berenices, and others in Cancer, Veneris, Ursa Major, and Leo Minor. It must, however, be observed, that in the cometary observations the 28 stellar divisions are frequently alluded to as extending to the Pole, without reference to these three spaces. Thus, in several instances, the comet is described as having passed through 12 or even 15 of these stellar divisions before it disappeared, all its early places having been within the circle of perpetual apparition, where such a circumstance might easily happen, on the assumption that the stellar divisions were confined to the Pole, without its course being in any way extraordinary, on account of its high northern latitude.

As these divisions are continually referred to in the astronomical observations of the Chinese, an acquaintance with them is essential in investigations such as form the object of this work. Tracings have, therefore, been made from original charts in a Chinese treatise on astronomy, so as to form a complete Celestial Atlas, fully elucidating their method of representing the heavens. This Atlas comprises the greater number of the

asterisms referred to in those observations. A few names, however, occur in them that are not to be found in any of the charts or lists I have hitherto met with, and are, consequently, mentioned as unascertained. The Atlas consists of maps of the 28 stellar divisions just referred to, with the names of the asterisms as they occur in the original map, and their pronunciation in English, with an account of the stars composing them according to our nomenclature. This Atlas will be found in the Appendix to this work.

In compiling the explanatory part relating to this Atlas, great assistance has been derived from a tract entitled 'Chinese Names of Stars and Constellations,' which forms an appendix to Morrison's Chinese Dictionary, and which was contributed to that work by the late John Roeris, Esq., formerly a Fellow of the Royal Astronomical Society. Another Catalogue, by Paulus Priscus Noe, contained in his 'Observationes Mathematicae et Physicae in India et China factae' (at Prague, 1710), has also been found of great service, in corroborating Roeris or throwing light on doubtful cases. Nothing, however, has been taken for granted, the stars depicted in these maps having been carefully verified by reference to, and comparison with, other star charts, both European and Chinese. To these is added an Index, by which, the name of the asterism being known, the chart in which it occurs can be readily found, and in order to render this Atlas still more intelligible, reduced drawings of the figures in Flamsteed's Atlas have been made, and the principal Chinese asterisms laid down upon the corresponding stars in them.

The Chinese arrange these 28 stellar divisions under four general heads, answering to our east, west, north, and south. These divisions are of very remote antiquity, and have received the names of Tsing Lung, 'the Azure Dragon,' Hsiung Woo, 'the Black Warrior,' Choo Nonou, 'the Red Bird,' and Pih Heo, 'the White Tiger.' Each of these comprises three of the divisions called Kung, answering to, although not identical with, our zodiacal signs. The nature of these Kung will shortly be explained. Under the first of the four above-mentioned divisions, the Azure Dragon, considered by the Chinese as the autumnal quarter, we have three of the Kung, answering to our signs, Libra, Scorpio, and Sagittarius, and seven of the stellar divisions, those from Kuo to Ko (see Table of the 28 Stellar Divisions), comprising stars from Virgo to Sagittarius. Under the second of these, the Black Warrior, we have three Kung, answering to Capricornus, Aquarius, and Pisces, and seven stellar divisions, those from Tow to Peih, extending from stars in Sagittarius to others in Pegasus and Pisces. Under the White Tiger we have three Kung, answering to Aries, Taurus, and Gemini, and seven stellar divisions, from Kwei to Tzun, i.e. from stars in Andromeda and Pisces to those in Orion. Under the Red Bird there Kung, answering to Cancer, Leo, and Virgo, and seven stellar divisions, being those from Teng to Chin, viz. from stars in Gemini to Corvus.

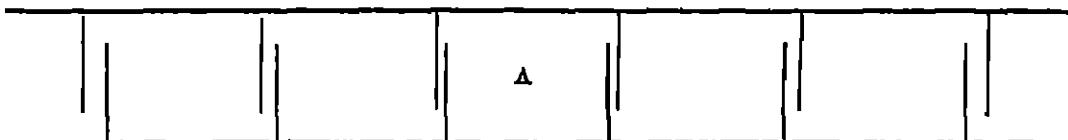
The Chinese divide their year into 24 portions, of 15 days each, thus making up the number of 360 days. These 24 portions are termed *Tze Ko*, the particulars relating to which will be found in a Table in the Appendix.

Of these 24 divisions, twelve, called *Kung Ko*, or *Kung* only, require more particular notice, inasmuch as they mark the twelve places in which the Sun and Moon come into conjunction, and are thus, in some degree, analogous to our twelve signs of the Zodiac.

They are distinguished in the Table by an asterisk. But it must not be supposed that the ancient names of these are in any way identical with our names of the signs, neither must they be confounded with the appellations introduced by the Jesuit Missionaries when they reformed the astronomy of the Chinese. They then adopted a set of names closely agreeing with our nomenclature, such as the White Ram for Aries, the Golden Bull for Taurus, and so on. It has been supposed by some, that as those names, agreeing so closely with those employed by us, are in use among the Chinese, they afford a convincing proof of the immense antiquity of our designations of the zodiacal signs. But no traces of these recent names are to be found in Chinese astronomy as it existed before the accession of the present dynasty, and, consequently, all inference as to their antiquity, deduced from the correspondence of the Chinese names of the zodiacal signs and those employed in European astronomy, are wholly untenable, as no such affinity between the two sets of names actually exists.

In the Appendix is a Table, showing the names of the ancient Chinese Kung Ke, placed side by side with the modern names, commencing with our sign Aries. These ancient names are extracted from the Astronomy of the Ming Dynasty, published at the commencement of the present dynasty, where they mark the divisions of a catalogue of stars, and the total want of correspondence between these and the names introduced by the Jesuit Missionaries is clearly demonstrated by this Table. These last names are taken from a modern Chinese work on astronomy published in 1819, in which the two sets of names occur side by side, and are thus distinguished—the ancient denominations are termed 'Chung Kwo Ming,' Middle Nation, or Chinese names, and the modern ones, 'Huo Kwo Ming,' Western Nation, or European names.

The 12 Kung are not only used by the Chinese in regulating the equinoxes, solstices, and lunations, but they are also employed in the computation of their Calendar, to ascertain the intercalary moon. It has already been stated, that these Kung Ko mark the places of the conjunctions of the Sun and Moon, and, consequently, those of the new moon, or lunations. Now as each Kung Ko indicates a period of 30 days, and a lunation is of but 29 days and a fraction, it follows that, sooner or later, two new moons must occur in one of these Kung, or periods of 30 days. Whenever this happens, that moon is an intercalary moon. In order to illustrate this, let us consider the upper line in the following diagram as representing a series of Kung periods of 30 days, and the lower one a series of new moons of 29 days and a fraction.



From this it is evident that after a time a lunation occurs as at A, that falls entirely within a Kung period which, consequently, has two new moons in it. This is the intercalary moon, and hence the Chinese rule, 'The intercalary moon is without a Kung.' Of these intercalary moons there are seven in the lunar cycle of 19 years.

The intercalary moon immediately follows the moon from which it receives its

designation. Thus, on reference to a Chinese Almanac for the 7th year of Hien Fung, 1857, I find the intercalary 5th moon immediately following the regular 5th moon of the Calendar of that year.

The character 隅, Jun, by which the Chinese designate the intercalary moon, affords a striking instance of the figurative nature of many of the Chinese characters. It is a compound one, formed of 门, Mun, a gate, or entrance, and 亜, Wang, an emperor. In each of the seasons it is the duty of the Emperor to officiate monthly in certain religious ceremonies, in halls provided for that purpose, which are arranged in a square, the sides facing the cardinal points. They call the building in which these halls are contained 'Ming Tang.' These ceremonies are fully particularised in the 'Lo Ko,' the Book of Ceremonies, or Rites, and are to be found in that work in the sixth book, called 'Yue Lung.' From this we learn that the Emperor, in the spring, performs the rites proper for that season in that part of the building facing the east, that his dress and other appointments are of a certain colour (green), with many other particulars not necessary to be mentioned here. In the summer season the ceremonies are performed in the halls facing the south, the dress, &c being of another colour, and so on for the remaining seasons. But there is no hall provided for the ceremonies required in the intercalary moon, they are consequently performed in the gateway, or entrance to the building, and hence the character Jun, representing the Emperor in the gateway, as that for the intercalary moon, is a very appropriate and significant symbol of this peculiarity in the performance of the rites for that moon. The institution of these ceremonies dates from extremely remote antiquity, and I may add that there is every appearance of their being still in use, for as late as 1787 the Emperor Keen Liang was, by a decree of the Tribunal of Rites and Ceremonies, allowed to perform these rites by deputy, his great age and consequent infirmities rendering it impossible for him to support the fatigue of going through them in person.

The 28 stellar divisions are evidently of very great antiquity, as the names of many of them occur in their most ancient works. They are to be found, together with the principal asterisms and stars composing them, in the Astronomical section of the Early Nan Dynasty, in the 'Sho Ko,' which was first published in the first century of our era. This section also contains rules for forming the Calendar and computing the ordinary, and intercalary months, together with observations of the Sun, Moon, and Planets, and of extraordinary appearances in the heavens, among which those of comets occupy a prominent position.

In the Astronomical section of the Annals of the Tung Dynasty, A.D. 618-906, is an enumeration of the 28 stellar divisions, and the asterisms composing them, with notices of Eclipses and of the 12 Kung, and also observations of the Sun, Moon, Planets, Comets, &c.

The Astronomy of the Ming Dynasty, A.D. 1368-1644, is, as might be expected, much more expanded, embracing not only the whole of the before mentioned particulars, but also comprising Tables of the Sun, Moon, and Planets, together with a Catalogue of Stars, with their latitudes and longitudes, both on the equator and the ecliptic. We are probably indebted to the Jesuit Missionaries for the greater part of this addi-

tional matter, as the Tables in particular bear evident marks of being from European sources.

A brief summary of the subjects treated upon in the 'Teen Wan,' or Astronomical section of the history of the Ming dynasty, and contained, according to my copy, in the 7th vol. of the History of that dynasty, will serve to give a more definite idea of the general nature of Chinese astronomy. It is divided into three chapters, the first of which has nine subdivisions, or sections. The first of these sections treats of the T'ang E, that is, of the two great divisions of the universe, Heaven and Earth. In the second are notices of the T'ieh, or seven Chung, which are enumerated as the Sun, Moon, and five Planets. The third section, Ilung Sing, 'Perpetual Stars,' relates to the fixed stars. In this section is the Catalogue of Stars before referred to, consisting of 109 stars, with their degrees reckoned upon the equator and the ecliptic. In the fifth section the places of 16 of the stellar divisions, in degrees of the 12 Kung, or zodiacal signs, are enumerated in like manner. The sixth section relates apparently to the application of instruments to the observation of the heavenly bodies, with their mode of construction, the Tsuen Ko, or armillary sphere, and Yuh Hung, the Jewelled Tube, being particularly referred to. The seventh section is devoted to observations of the length of the shadow of the gnomon in various places, and in different seasons. The eighth relates to the method of reckoning the longitude, and the ninth to Chung Sing, 'Middle Stars,' by which term they appear to designate certain stars seen on the meridian at different seasons of the year.

The second chapter consists of four sections. The first of these is devoted to observations of Occultations of Planets by the Moon, and the following examples, showing the general style, may be of some interest. They commence thus —

In the 14th year of the epoch Hung Woo, the 5th moon, on the day Kou Shin, Saturn was occulted (by the Moon) that is, on May 31, 1368.

In the 12th year of the same epoch, 3rd moon, day Woo Shin, Mercury was occulted that is, March 13, 1380.

The second section relates to Occultations of Planets by each other. The observations run thus —

Hung Woo, 6th year, 3rd moon, day Woo Shin, Mars occulted Saturn that is, 1373, April 19.

In the 6th moon of the same year, day Jin Shin, Venus occulted Jupiter that is, 1373, June 22.

The third section is entitled 'The Five Planets in one place,' by which conjunctions of several of the planets are evidently meant. The following are examples —

Hung Woo, 14th year, 6th moon, day Kwei Wu, Mercury, Mars, and Venus were together in the stellar division T'ien that is, 1381, May 22. These planets were in conjunction in Gemini.

In the 17th year, 6th moon, day Ping Souh, Jupiter, Saturn, and Venus were together in the stellar division T'ien that is, 1384, July 8. The stellar division T'ien is determined by the bright stars in Orion. The conjunction was most likely in Taurus or Gemini.

The fourth section treats of Stars Occulted by the Planets. The observations run thus —

Hung Woo, 7th year, 8th moon, day Yih Sze, Jupiter occulted the great star in Hoon Ynon (Regulus) that is, on August 18, 1374.

The observations in this section are exceedingly numerous, they occupy about 70 pages but it is evident they are merely eye observations, nothing like instrumental accuracy having been attempted, and they are also to the nearest day only. Whether they are ever likely to be of any value to modern astronomy must be left to others to determine. They are exceedingly simple, and could be translated without the least difficulty. I may also observe that the word (*Fan*) which I have rendered 'occulted,' signifies 'to screen,' 'to shade,' 'to put under shelter,' obviously implying our term, 'to occult.'

The next chapter contains nine sections. The first of these consists chiefly of stars seen in the daytime, being principally Venus, Jupiter, and Mars.

The next two sections are of much greater importance. They contain observations of what they term *Kih Sing*, or 'Temporary Stars,' many of which are undoubtedly comets, and of *Suy Sing*, 'Broon Stars,' or comets. It is from these two sections most of the observations of comets recorded in the following pages as having been seen during this dynasty have been taken.

The next section records 'Changes in the Heavens,' and the succeeding one, 'Changes in the Sun and Moon,' of which the following may be given as examples —

Hung Woo, 2nd year, 12th moon, day Kao Ts'e, a black spot was seen in the middle of the Sun that is, January 1, 1370.

The same was observed in the 3rd year, 9th moon, day Woo Sheu, 10th moon, day Tung Sze, and 11th moon, day Kao Shun that is, 1370, Oct 2, Oct 21, and Nov 7.

The sixth section contains accounts of Haloes round the Sun and Moon, the seventh, Changes in the Stars, the eighth, Observations of Falling Stars, and the ninth, accounts of extraordinary Clouds and Vapours.

The volumes which immediately follow the seventh contain, under another title, chiefly what we should perhaps call Meteorological Notices, and those from the ninth to the twelfth inclusive are devoted to a collection of Tables of the Sun, Moon, and Planets, evidently from European sources.

I have already mentioned that I have preferred determining the stellar divisions by the asterisms which supply their names, instead of a particular star, as being more in accordance with the principles of the ancient astronomy of the Chinese. I may also observe, that in every instance, in the following Observations of Comets, where the stellar division is mentioned, the determining asterism alone is given. But as the projection of particular determining stars takes away the points from which the computers of cometary orbits must start, it becomes desirable that the first degree of each stellar division, as given in original Ohuoso Charts, or Lists of Stars, should be ascertained as nearly as possible. Many of these have been carefully examined and collated, but I must express my regret that I have not hitherto met with any chart published before the introduction of the modern system, all I have seen being comparatively of modern date, and commencing their degrees at the visual equinox whereas it appears to me

most likely that the early Chinese astronomer, when their system of astronomy was first established, by placing the stellar division Koo (determined by α , &c Virginis) first, in all probability commenced their reckoning with the autumnal divisions.

In order to supply the needful information as to the commanding degrees of the stellar divisions, I have been induced to form the following Table, which I trust will be found of service for that purpose.

No	Name	Degrees according to Chart	Degrees according to Compass	Determining Asterism	Determining Star according to Chart	Final Degree of each S D according to Chart
1	Koo	11	11	α Virginis and another	α Virginis	203
2	Kung	11	11	ι , ζ , λ , θ Virginis	ι Virginis	213
3	To	18	18	α , β , γ , ν Librae	β Librae	224
4	Fang	5	5	β , δ , π , ρ in Scorpio	π in Scorpio	242
5	Suu	7	8	α , σ , τ in Scorpio	σ in Scorpio	247
6	Wei	16	15	ϵ , μ , ι , &c in Scropio	μ in Scropio	254
7	Ke	9	9	ι , δ , ϵ , &c Sagittarii	γ Sagittarii	270
8	Tow	24	24	ξ , τ , σ , ϕ , λ , μ Sagittarii	ϕ Sagittarii	279
9	Nou	8	8	α , β , &c Capricorni	β Capricorni	304
10	Nou	12	11	ϵ , μ , ν , &c Aquarii	ϵ Aquarii	311
11	Hou	10	10	β Aquarii and another	β Aquarii	323
12	Wei	20	20	α Aquarii, θ , ϵ Pegasus	α Aquarii	333
13	Shih	15	16	α , β Pegasus, &c	α Pegasus	353
14	Poeh	12	13	γ Pegasus, α Andromedae	γ Pegasus	8
15	Kwoh	12	11	β , δ , ϵ Andromedae, &c	β Andromedae	22
16	Lew	13	13	α , β , γ Arietis	β Arietis	33
17	Wei	13	12	The Three stars in Musca	α Muscae	46
18	Miod	8	9	The Plough	η Plough	59
19	Poeh	15	15	α , γ , δ , ϵ , &c Tauri	ϵ Tauri	67
20	Tsuy	1	1	λ and others in head of Orion	λ Orionis	81
21	Twan	11	11	α , β , γ , δ , &c Orionis	δ Orionis	83
22	Twang	31	31	γ , ϵ , λ , μ , &c Centauri	μ Centauri	94
23	Kwoh	4	5	γ , δ , η , θ Centauri	θ Centauri	125
24	Lew	17	17	δ , ϵ , θ , &c Hydrus	δ Hydrus	129
25	Sing	9	8	α , τ , &c Hydrus	α Hydrus	146
26	Chang	18	18	ι , λ , μ , &c Hydrus	ι Hydrus	155
27	Yon	17	17	α , &c Crateris	α Crateris	173
28	Chun	13	13	β , &c Corvi	γ Corvi	190
		360	360			

The degrees in the preceding Table are taken chiefly from a Chart which appeared to me to be the most trustworthy of several which are in the possession of the Royal Astronomical Society. It consists of a planisphere bounded by a circle, on which the degrees are marked as on the equator. Lines meeting in the centre and cutting this circle indicate the extent of each stellar division to the nearest degree without fractions, the first degree marking the vernal equinox. The numbers are from 1 to 360, the first being the 8th degree of S D Shih, determined by a Pegasi and a Andromeda. There are two dates on this chart—the earliest, possibly that of its construction, is the 25th year of Keen Iung, 1760, and the second, indicating its subsequent reproduction, the 13th year of Koo King, 1808.

Many other charts and authorities have been consulted. I may mention an exceedingly fine compass, formerly in the possession of the late Admiral Smyth, and presented to me by his widow, Mrs. Smyth. On it are twenty four concentric circles, relating to the different purposes to which the compass is applied by the Chinese. Of these, two are devoted to the stellar divisions and their respective degrees, the one being of 360° the other of $365'$. As there is a slight difference in the numbers of the chart and the compass I have in the preceding Table copied both.

It may also be necessary to observe that this Table contains the names of the 28 stellar divisions, with the degrees of each according to the before mentioned chart and the compass circle of 360° , together with the stars composing them determining asterisms and the first degree of each stellar division. I have also introduced the determining stars of the stellar divisions according to Biot. And it may also be mentioned, that a line drawn from the centre through a Andromeda cuts the ninth degree of the outer circle of the Chart. The other particulars that may be required to be known will be found in the Table of Stellar Divisions, and in the maps of those divisions in the Celestial Atlas, both of which form part of the Appendix.

The plan I have adopted in the translation of these Observations of Comets, in the MS. copy now in the library of the Royal Astronomical Society, is in every case to give the Chinese text in the original character, taken chiefly from the 'Encyclopaedia' of Ma Twan Lin and the 'She Ko'. The reason of this is founded on the experience not only of its utility in a philological point of view, but also from its absolute necessity in any critical examination of the results, as without it no definite opinion can be formed as to the real import of the Chinese words employed. And it is much to be regretted that it was found impracticable to reproduce it in the present publication, on account of the extreme difficulty in procuring the necessary means of so doing. It may also be observed that as, in every instance, not only are the Chinese characters given, but also the corresponding sounds in English, according to Morrison's Dictionary, any character can without difficulty be found in that portion of the said Dictionary which is arranged according to the syllables, and thus any one so inclined can, with a very little application, verify for himself and although he may have scarcely any, or even no knowledge whatever of the language, he can readily ascertain whether the ideas expressed in the translation are in accordance with the meanings of the characters as given in that Dictionary.

I may also remark, that in the translation the word 'Chih,' which is that by which

the measure of the length of the tail of a comet is expressed, is everywhere rendered by 'cubit,' instead of 'degree,' the word used by Biot and others. As I had resolved to make my version as literal as possible, I could not consistently express that word by any other term. It is evidently used by the Chinese to express the length of the tail of a comet in an indefinite sense, just as we should employ foot or yard for that purpose, and the estimated length is consequently of about the same value. Readers may, however, if they think it advisable, substitute the word 'degree' for 'cubit,' but it must be borne in mind that that word does not express the Chinese idea, and, consequently, cannot be depended upon any more than the other, in giving the exact length of the tail of a comet. The word in Chinese for degree is 'Tso,' this is a definite measure, but I do not find it anywhere employed in these observations to express the length of the tail of a comet, the word Chih, 'cubit,' being invariably used. I may also observe, that I have found no instance of the word Chih being used to express a 'degree.'

The 'Tsun,' or tenth part of the cubit, appears to be its unit. The original Tsun, or that of the ancients, is said to have been formed by placing ten grains of a certain cereal resembling our millet side by side, these seeds being of an oval form and pointed. The modern Tsun is estimated by placing ten of these seeds end to end, and thus there is a considerable difference between the ancient and modern Chih. The estimating the length of the Tsun by seeds is remarkable, as closely resembling our 'three barleycorns out of the middle of the ear' to make one inch. The relation of the measures of length that occur in the text is as follows —

10 Tsun make 1 Chih,
10 Chih make 1 Chung

From what I can ascertain the Chih is rather more than an English foot, the Tsun being about an inch and a fraction.

From the preceding remarks it must be evident, that the production of this work has been attended with no ordinary amount of labour. Many thousands of Chinese characters, required to be carefully copied and accurately translated, the whole of the dates ascertained by computation, and numerous works, both Chinese and European, had to be examined or collated. In addition to these, the construction of the Tables for computing the dates of their chronology, and of the Atlas, both of which have been found not merely useful but indispensable to the carrying on of the work, required a great amount of research and attention. How far the results may be worthy of the time and labour bestowed upon them, must be left for those who are better qualified than myself to form an opinion on such subjects, to determine. Errors may doubtless be found to exist, although every care has been taken to avoid them, and it is hoped that none seriously affecting the character of any part of the work will be found. It must, however, be remembered, that this is strictly a work of reference, and as such may, at some future period, be of service in investigations respecting the former appearance of any particular comet that may then pay us a visit.

I have already mentioned various Chinese works employed in this compilation. In

addition to these I must observe, that I have received much valuable information from works by European authors whose attention has been directed to Chinese astronomy and chronology. Among these I may mention Gaubil, whose 'Traité de la Chronologie Chinoise' has been of great assistance. A paper by Idelka, in the 'Abhandlungen' of the Berlin Academy for 1837, entitled 'Über die Zeitangabe der Chinesen,' has afforded much valuable information. Pingré's 'Comélographie,' and J. B. Biot's 'Précis de l'Astronomie Chinoise,' have also been consulted with advantage, and Ed. Biot's 'Catalogue des Comètes observées en Chine,' published in the 'Correspondance des Temps' for 1846, has been carefully examined and collated, and I have much pleasure in testifying to the general accuracy of that work. Morrison's 'View of China,' for philosophical purposes, has been found of great service, as affording much most illuminous information.

I must also express my acknowledgments to the Rev. Professor Humble, for his kindness in supplying me with Ma Twan Lin's 'Observations of Comets,' which have been found of the greatest value, as affording information not to be met with readily, if at all, elsewhere. And also for his valuable assistance in looking out and supplying me with such Chinese type as was required in the subsequent part of this work, which has enabled me to present it in a more efficient form than I could have adopted otherwise.

In conclusion I have only to express my confident expectation, that in placing the MS. of this work in the library of the Royal Astronomical Society, it will be in the most likely position to be of service to future inquirers into the subject of Chinese Astronomy, and more particularly of that portion of it which relates to their Cometary observations.

JOHN WILLIAMS

April, 1871

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Note — It may be necessary to offer some explanation of the departure from strict chronological order in the following Index to the Cometary Observations. Thus in p. xxvii after No. 269, v. 1-6, No. 270, v. 941, to 277, v. 1237, follow 'These are observations made in another part of China by other Astronomers during two contemporaneous minor dynasties—the Liao, v. 916-1125, and the Jin, 1118-1236, and as I have strictly followed the arrangement of Ma Twan Lin, the above is the place in which they occur in his work. Some of these observations refer to comets noticed in the preceding accounts again, in the last column a number of observations, commencing in 1376, follow those ending in 1640. These are observations of the Kih Sung, ex tremely short, which form a separate section in the Astronomy of the Ming dynasty. It may also be noticed, that in v. 837 many comets are recorded as having appeared. Two undoubtedly, and possibly a third of these observations, refer to comets previously observed in the same year. They are given as they occur in 'M. T. L.'

INDEX TO THE SUCCEEDING COMETARY OBSERVATIONS

No.	Year & D.	Month & Day	No.	Year & D.	Month & Day	No.	Year & D.	Month & Day
1	611	July	61	66	February 20	121	304	May
2	531	—	62	71	March 6	123	305	September
3	516	July	63	75	July 14	125	305	November 21
4	501	December	64	76	August 9	126	312	April 16
5	467	—	65	77	January 23	127	316	February 16
6	433	—	66	84	May 25	128	318	March 5
7	305	—	67	102	January 7	129	319	December 3
8	303	—	68	110	January	130	340	November 23
9	296	—	69	131	—	130	358	July 1
10	240	—	70	141	March 27	131	361	April 16
11	238	April	71	149	October 19	132	369	March
12	234	January	72	161	June 14	133	371	March 9
13	214	—	73	173	September	134	388	April
14	233	—	74	180	Winter	135	390	August 22
15	204	August	75	184	August	136	393	March
16	172	—	76	185	December 7	137	400	March 19
17	157	October	77	188	March	138	401	January 3
18	151	January	78	188	July 29	139	402	November 12
19	155	July	79	193	October 1	140	415	June 24
20	154	January	80	193	November	141	418	September 15
21	148	May	81	200	November 7	142	419	January 7
22	147	March 15	82	204	December	143	422	March 21
23	147	August 6	83	206	February	144	424	December 17
24	147	October	84	207	November 10	145	425	October 13
25	138	March	85	213	January	146	423	October 15
26	138	May	86	218	April	147	424	November 2
27	133	August	87	230	November	148	449	November 11
28	137	October	88	222	November 4	149	451	May 17
29	135	July	89	225	December 9	150	501	January 13
30	135	September	90	232	December 1	151	501	April 14
31	131	June	91	236	November 30	152	538	January 6 (?)
32	120	—	92	238	September	153	539	November 17
33	119	May	93	238	November 19	154	560	October 4
34	110	—	94	240	November 5	155	565	July 23
35	108 01 9	—	95	245	September 18	156	568	August 3
36	87	August	96	247	January 16	157	575	April 27
37	81	March	97	248	April	158	576	January 16
38	77	September	98	251	December 21	159	416	July 27
39	76	May	99	252	March 25	160	563	April 21
40	71	March	100	253	December	161	564	July 21
41	71	May 10	101	253	February	162	568	July
42	72	August 20	102	257	December	163	368	August 24
43	70	August 4	103	259	November 23	164	561	September 26
44	69	September	104	261	December 2	165	568	July 22
45	61	July	105	265	June	166	568	July 21
46	49	April	106	268	February 18	167	374	April 4
47	48	April	107	275	January	168	573	May 31
48	17	June	108	276	June 14	169	588	November 22
49	41	—	109	277	February	170	591	November 10
50	33	January	110	279	April	171	607	March 13
51	12	August 26	111	281	September	172	607	April 4
52	5	March 5	112	281	December	173	615	July
53	1	April	113	283	April 22	174	616	October
54	13	December	114	287	September	175	616	March 16
55	13	November	115	290	May	176	626	September 22
56	39	March 13	117	296	May	177	634	—
57	55	June 1	118	301	April	178	639	August 1
58	60	August 9	119	301	January	179	643	September 29
59	61	September 27	120	302	May	180	663	May 24
60	65	June 4	121	303	May	181	667	January 3
	A.D.				April	18	676	

Index to succeeding Cometary Observations

No.	Year A.D.	Month & Day	No.	Year A.D.	Month & Day	No.	Year A.D.	Month & Day
183	676	July 7	186	1036	January 15	310	1452	March 21
184	681	October 17	187	1049	March 10	311	1456	May 27
185	683	April 20	188	1056	August	312	1457	January 14
186	684	July 8	189	1066	April 4	313	1457	June 15
187	684	September 13	190	1075	November 17	314	1457	October 26
188	707	November 10	191	1080	August 30	315	1461	August 5
189	708	March 10	192	1097	October 6	316	1464	March
190	708	September 21	193	1106	January 10	317	1464	September 18
191	710-713	—	194	1110	May 29	318	1471	January 16
192	730	June 30	195	1126	May 30	319	1490	December 31
193	739	March 17	196	1136	December	320	1500	May 8
194	760	May 16	197	1138	September	321	1506	July 31
195	760	May 20	198	1145	January 5	322	1506	August 10
196	767	January 12	199	1152	August 14	323	1520	February
197	770	June 15	200	1145	April 26	324	1521	July
197*	773	January 17	201	1152	June 4	325	1531	August 5
198	815	April	202	1147	January 6	326	1532	September 2
199	817	February 17	203	1147	January 12	327	1533	July 1
200	821	February 27	204	1151	August 21	328	1539	April 30
201	821	March 7	205	1152	September 15	329	1551	June 23
202	828	July 5	206	1152	October 18	330	1556	March 1
203	829	December	207	1167	January 31	331	1557	October 10
204	834	October 9	208	1168	January 23	332	1569	November 9
205	837	March 21	209	1169	July 26	333	1577	November 14
206	837	April 29	210	1170	August 9	334	1580	October 1
207	837	May 3	211	1171	January 10	335	1581	May 20
208	837	May 21	212	1166	April	336	1583	October 3
209	837	June 17	213	1180	January 6	337	1591	April 3
210	837	June 26	214	1197	December 6	338	1593	July 20
211	837	September 9	215	1133	September 29	339	1596	July 26
212	838	November 11	216	1126	September 13	340	1607	September 11
213	838	November 21	217	1127	September 21	341	1618	November 16
214	839	February 7	218	1164	July 26	342	1619	February 3
215	839	March 18	219	1177	March 9	343	1639	August 20
216	840	March 20	220	1183	November 7	344	1640	December 18
217	840	December 3	221	1189	June 24	345	1576	June 22
218	841	July	222	1191	September 16	346	1578	September 26
219	841	December 25	223	1193	January 3	347	1583	October 23
220	851	April	224	1193	April 13	348	1588	March 29
221	856	September 27	225	1195	November 21	349	1430	September 9
222	864	June 21	226	1197	May 4	350	1430	November 14
223	868	January	227	1197	June 16	351	1431	January 3
224	869	September 1	228	1198	March 24	352	1451	January 4
225	877	Janu-	229	1198	November 24	353	1458	December 24
226	885	—	230	1196	September 21	354	1461	June 29
227	886	June 13	231	1190	March 18	355	1462	June 29
228	891	May 24	232	1198	March 5	356	1491	January 19
229	892	December	233	1192	June 29	357	1495	January 7
230	893	May 6	234	1194	March 16	358	1499	August 16
231	894	February	235	1195	October 25	359	1502	November 28
232	905	May 22	236	1198	January 7	360	1521	February 7
233	913	May 19	237	1198	April 8	361	1521	February 5
234	928	October 14	238	1198	May	362	1524	March 9
235	936	October 21	239	1199	May 23	363	1524	June 18
236	941	September 18	240	1197	December 14	364	1530	March 24
237	943	November 5	241	1191	May 15	365	1545	December 16
238	956	March 19	242	1193	January 3	366	1578	January 22
239	975	April	243	1193	May 29 (or 26)	367	1584	July 1
240	975	August 3	244	1193	September 15	368	1603	September 30
241	989	August 19	245	1195	March 25	369	1609	—
242	998	January 23	246	1199	July 12	370	1618	November 24
243	1001	December 23	247	1199	August 6	371	1618	January 5
244	1018	August 4	248	1199	December 10	372	1621	May 12
245	1035	September 25	249	1199	January 19	373	1621	—

No. 207 makes up the full number .73

COMETS OBSERVED IN CHINA.

1

B C 611 July

DURING the period of the Chun Tsow, in the 14th year of the reign of Wan Kung, Prince of Loo, in the autumn, in the 7th moon, a comet entered into Pih Tow

The 'Chun Tsow' is a celebrated historical work, said to have been written by Confucius. It embraces the period between B C 722 and 481, and records the history of the prince of Loo, one of the minor states into which China was divided during the Chow dynasty. It was the native place of Confucius, and that in which he passed the greater portion of his life. In that work we are informed that the 14th year of Wan Kung corresponded with the 2nd year of the Emperor Kwang Wang, of the Chow dynasty, whose reign commenced B C 612. Hence the 14th year of Wan Kung was B C 611 7th moon, July

Pih Tow, the seven bright stars in Ursa Major

M T L

2

B C 531

In the winter of the 10th year of Chaou Kung, Prince of Loo, there was a comet to the left of Ta Shin. It extended to Huan

Chaou Kung, B C 531 10th year

Ta Shin According to the Commentary this appears to be a star in one of the stellar divisions, Fang Sin or Wei, all of which are determined by stars in Scorpio. The conclusion seems to be, that Ta Shin is Antares

Huan, possibly Toon Huan, the Milky Way

M T L

3

B C 516 July.

In the 26th year of the same Prince, in the 6th moon, there was a comet near the star Taso

Chaou Kung, B C 516 26th year, 6th moon, July

Star Taso, II Herculis

M T L

4

B C 502 December

In the 13th year of Gae Kung, in the winter, the 11th moon, there was a comet in the east

Gae Kung, B C 502 13th year, 11th moon, December

M T L

CHOW DYNASTY, B.C. 1122-314

B.O. 467

- In the 2nd year of the Emperor Ching Ting Wang a comet was seen
Emperor Ching Ting Wang, B.C. 468-441 2nd year, 467

M T L

6 B.C. 433

- In the 8th year of the Emperor Kao Wang a comet was soon
Emperor Kao Wang, B.C. 440-424 8th year, 433

M. T. L.

7 BO 305

- In the 10th year of the Emperor Nan Wang a comet was seen.
Emperor Nan Wang, B.C. 214-254 10th year, 205

M.T.L.

B.G. 303

- In the 12th year of the same Emperor a comet was seen
Emperor Nan Wang, p. 9 303 12th year

M.T.L.

PG 296

- In his 19th year a comet was seen.
Nan Wang, B.C. 206 19th year

M. T. L.

TANG DYNASTY, B.C. 220-283

18 PG 240

- In the 7th year of the reign of Cho Hwang a comet first appeared in the east. It was afterwards seen in the north. In the 5th moon it was seen for 16 days in the west.

The Hwang was the Emperor who is said to have caused all the books to be burned and the literati to be destroyed. This was done in order that he might be considered by posterity as the founder of the Chinese Empire. His reign over the Tsin, one of the minor states, commenced B.C. 246. It was not until the 26th year he obtained the supreme power, and thus founded the Tsin dynasty. His reign is reckoned from 246, hence his 7th year is B.C. 240, 5th moon, May.

MULTI

BC 238 April

- In the 9th year of the same Emperor a doubtful star was seen in the horizon. In the 4th moon it was seen in the west. It was also seen in the north, to the south of Tow, for 80 days.

Chie Hwang, B.C. 238 9th year, 4th moon, April

Tow, most likely Pi-h Tow, the seven bright stars in Ursa Major.

117

12

B C 234 January

In the 13th year of the same Emperor, in the 1st moon, a comet was seen in the east

Che Hwang, B C 234 13th year, 1st moon, January

M T L

13

B C 214

In his 33rd year a bright star appeared in the east

Che Hwang, B C 214 33rd year

M T L

14

B C 233

In the Astronomy of the Han dynasty it is recorded, that in the time of Che Hwang, of the Tan dynasty, in his 15th year, four comets were seen during 80 days. They extended to the horizon

Che Hwang, B C 233 15th year

M T L

HAN DYNASTY, B C 206 to A D 264

15

B C 204 August

In the 31st year of the Han Emperor, the 7th moon, there was a comet near Te Koo

She Ke

In addition, 'Ma Twan Lin' gives the name of the Emperor, Kou Te
Kou To, B C 206-195 31st year, 7th moon, August, 204
Te Koo, Arcturus

16

B C 172

In the 8th year of the Emperor Wan Te a tailed star appeared in the east

Emperor Wan Te, B C 179-157 8th year, 172

She Ke

17

B C 157 October

In the reign of the same Emperor, the 7th year of the epoch How Yuan, the 9th moon, a comet appeared in the west. From first to last it was in Stellar Divisions Wei and Ke. It pointed towards S D Hsu and Wei. It was about 10 cubits in length, and extended to Teon Han. After 16 days it was no longer seen.

Wan To, epoch How Yuan (the first of the epochs), B C 163-157 7th year, 157, 9th moon, October

Stellar Division Wei determined by α , μ , ν , &c in Scorpio

Ke determined by γ , δ , ϵ , &c Sagittarius

Hsu determined by β Aquarii and another

Wei determined by α Aquarii and θ , ϵ Pegasus

Toon Han, the Milky Way

Comets observed in China

It must be observed here, that in the list of the S D there are no fewer than four whose names are expressed in English characters by Wei of these, two occur in the description of this comet. The original characters of the whole of these are totally unlike

M T L

18

B C 154 January

In the 2nd year of the Emperor King To there was a comet in the south west
 Emperor King Ta, B C 156-141 2nd year, 155, 12th moon, 154, January
 There was no epoch for the first seven years of King To

19

B C 155 July

In the 6th moon of the same year a comet appeared in the north east
 6th moon, 155, July

She Ke

20

B C 154 February

In the 3rd year, 1st moon, a tailed star was seen in the west
 King Ta, B C 154 3rd year, 1st moon, February

She Ke

21

B C 148 May

In the 2nd year of the epoch Chung Yuen, the 4th moon, there was a comet in the north west

Epoch Chung Yuen, B C 149-144 2nd year, 148, 4th moon, May
 Chung Yuen was the first epoch of King To

She Ke

22

B C 147 March 14

In the 3rd year of the epoch Chung Yuen, the 3rd moon, on the day Ting Yow, a comet was seen at night in the north-west its colour was white It was 10 cubits in length Its place was in Tsuy Ho As it passed on it increased but little in size After 15 days it was no longer seen

Chung Yuen, B C 147 3rd year, 3rd moon, day Ting Yow, March 14
 Tsuy Ho, possibly S D Tsuy, λ and others in head of Orion

She Ke, M T L

23

B C 147 August 6

In the 3rd year of the epoch Chung Yuen, the 6th moon, on the day Jin Souh, there was a comet in the south west it was in the southern part of S D Fang When it left Fang it was 20 cubits in length It was as large as a two tow vessel Its colour was white On the day Kwei Hoo its place was to the north-east of S D Sun Its length was then 10 cubits On the day Kee Tse it was in S D Wei On the day Ting Maou it entered S D Ke, to the north, near the star Han It gradually lessened,

until it resembled a peach. On the day Tin Shin it disappeared, having been visible altogether for 10 days.

Epoch Chung Yuan, B.C. 147 1st year, 6th moon, day Jin Souh, August 6th, day Kwei Hae, August 7th, Koo Tsoo, August 8th, Ting Maou, August 11th, Tin Shin, August 16th

S D Sin, determined by Antares and others in Scorpio

Wei determined by ϵ , μ , ν , and others, in Scorpio

Ko determined by γ , δ , ϵ Sagittarii and others

Star Han, ζ Ophiuchi

She Ko

24

B.C. 147 October

In the 9th moon of the same year there was a comet in the north-west

Chung Yuan, B.C. 147 9th moon, October

25

B.C. 138 March

In the reign of the Emperor Woo Te, the 3rd year of the epoch Keen Yuan, the 2nd moon, there was a comet in S D Chang. It passed through Tao Wei into Tsze Kung. It went into Tsoo Han. The 'Chun Tsow' says the comet was in Pih Tow

Emperor Woo Te, B.C. 140-87, epoch Keen Yuan, 140-135 B.C. 138, 3rd year, 2nd moon, March

S D Chang determined by κ , λ , μ , ν , ϕ Pyxis

Tao Wei, space between stars in Loo and Virgo

Sze Kung, circle of perpetual apparition

Tsoo Han, the Milky Way

Pih Tow, bright stars in Ursa Major

M T L

26

B.C. 138 May

In the 4th moon of the same year there was a comet in Tsoo Ko. It passed into Chih Neu.

Epoch Keen Yuan, B.C. 138 3rd year, 4th moon, May

Tsoo Ko, θ and others in Hercules

Chih Neu, α and two other stars in Lyra

M T L

27

B.C. 138 August

In the 7th moon of the same year there was a comet in the north-east

B.C. 138 7th moon, August

M T L

28

B.C. 137 October

In the 4th year of the same epoch, 9th moon, there was a comet in the north-east

Keen Yuan, B.C. 137 4th year, 9th moon, October

M T L

29

B C 135 July

In the 6th year of the same epoch, the 6th moon, there was a comet in the west
 Keen Yuan, B C 135 6th year, 6th moon, July M T L

30

B C 135 September

In the 8th moon of the same year there was a comet in the east its tail extended
 across the heavens It was visible for 30 days

Keen Yuan, B C 135 6th year, 8th moon, September M T L

31

B C 134 June

In the 1st year of the epoch Yuen Kwang, the 6th moon, a strange star was seen
 in S D Fang

Epoch Yuen Kwang, B C 134-129 1st year, 6th moon, 134, June
 S D Fang determined by β , δ , π , and others, in Scorpio She Ke

32

B C 120

In the 3rd year of the epoch Yuen Show, in the spring, there was a comet in
 the East

Epoch Yuen Show, B C 112-117 3rd year, 120 She Ke

33

B C 119 May.

In the 4th year of the same epoch, in the 4th moon, a comet appeared in the
 north-west

Yuen Show, 4th year, B C 119 4th moon, May M T L

34

B C 110

In the 1st year of the epoch Yuen Fung, the 5th moon, there was a comet in the
 eastern part of the S D Tsung It was in San Tau

Epoch Yuen Fung, B C 110-105 1st year, 5th moon, 110
 S D Tsung, γ , ζ , μ , ν , and others, in Gemini
 San Tau, the foot of Ursa Major M T L Tung Keen

35

B C. 109 or 108

In the middle of the epoch Yuen Fung there was a comet in Ho Shoo

Yuen Fung, middle B C 109 or 108
 Ho Shoo, unascertained M T. L Tung Keen

36

B C 87 August

In the 2nd year of the epoch Hlow Yuan, the 7th moon, there was a comet in the east

Hlow Yuan, B C 88-87 2nd year, 7th moon, 87, August Tung Keen

37

B C 84 March

In the reign of the Emperor Chau Te, the 3rd year of the epoch Che Yuan, the 2nd moon, there was a comet in the north-west

Emperor Chau Te, B C 86-74, epoch Che Yuan, 86-81 3rd year, 2nd moon, 84, March Tung Keen

38

B C 77 September

In the 4th year of the epoch Yuen Fung, the 9th moon, there was a strange star in the middle of Tso Kung It was between the stars Choo in Tow and Koih

Epoch Yuen Fung, 80-75 4th year, 9th moon, 77, September

Tso Kung, circle of perpetual apparition

Tow, the seven stars in Ursa Major

Choo, a Ursa Majoris

Koih, Polaris

She Ke

39

B C 76 May

In the 5th year of the same epoch, the 4th moon, a bright star was seen between the S D Kwei and Low

Yuen Fung, B C 76 5th year, 4th moon, May

S D Kwei determined by β , δ , ϵ , and others in Andromeda, and stars in Pisces

Low determined by α , β , γ Arietis

She Ke

40

B C 74 March

In the 1st year of the epoch Yuen Ping, the 2nd moon, there was a large falling star like the moon Many stars followed, all going to the west

Epoch Yuen Ping, B C 74 2nd moon, March

This appears to have been a large meteor

Tung Keen

41

B C 73 May 10

In the reign of Scouen Te, the 1st year of the epoch Pun Cho, the 4th moon, on the day Jin Seuh, early in the evening, a tailed star appeared to the west of the S D Tsan

Emperor Scouen Te, B C 73-49, epoch Pun Cho, 73-70 1st year, 4th moon, day Jin Seuh, 73, May 10

S D Tsan, determined by α , β , γ , δ , &c Orionis

She Ke

42

B C 72 August 20

In the 2nd year of the same epoch, the 7th moon, on the day Sun Hoo, a comet appeared in S D Yih

Pun Cho, n o 72 2nd year, 7th moon, day Sun Hoo, August 20

S D Yih, determined by α and other stars in Crater

She Ke

43

B C 70 August 4

In the 4th year of the same epoch, the 7th moon, day Koo Shin, a comet appeared in S D Yih it passed near the moon

Pun Cho, n o 70 4th year, 7th moon, day Koo Shin, August 4

S D Yih, determined by α and others in Crater

She Ke

44

B C 69 February

In the 1st year of the epoch To Tsoo, the 1st moon, there was a comet in the west

Epoch To Tsoo, n o 69-66 1st year, 1st moon, 69, January *M T L*

45

B C 61 July

In the 1st year of the epoch Shin Tsoo, the 6th moon, there was a comet in the east

Epoch Shin Tsoo, n o 61-58 1st year, 6th moon, 61, July

She Ke

46

B C 49 April

In the 1st year of the epoch Hien Lung, the 3rd moon, a strange star appeared to the north-east of Wang Loang it was about 9 cubits in length Its direction was to the west It appeared between Ko Thau and Tsoo Kung, into which it entered

Epoch Hien Lung, n o 49 1st year, 3rd moon, 49, April

Wang Loang, β Cassiopeia

Ko Thau, ν, ξ, and others, in Cassiopeia

Tsoo Kung, made of perpetual opposition

She Ke

47

B C 48 April

In the reign of Yuan Te, the 1st year of the epoch Choo Yuan, the 3rd moon, a strange star, resembling a large molon, was seen Its colour was a bluish white Its place was in Nan Tow, near the second star It was about 4 cubits in length

Emperor Yuan Te, n o 48-33, epoch Choo Yuan, 48-44 1st year, 3rd moon, 48, April.

Nan Tow, same as S D. Tow, determined by ζ, τ, σ, and others, in Sagittarius

She Ke

48

B C 47 June

In the 2nd year of the epoch Choo Yuen, the 5th moon, a comet was seen in the degrees of S D Maou. It was about 5 cubits to the east of Kouen Shoo. Its colour was a bluish white. It was bright, and about $\frac{1}{6}$ ths of a cubit in length.

Epoch Choo Yuen, B C 47 2nd year, 5th moon, June

S D Maou, determined by the Plenados

Kouen Shoo, ζ , ν , and others in Poisous

She Ke

49

B C 44

In the 5th year of the same epoch a comet appeared in the north-east. Its colour was a reddish yellow. It was 8 cubits in length. A few days after, its length was about 10 cubits. It was then in the north-east, pointing towards the S D Tsan. After about two months (?) it turned again to the west.

Epoch Choo Yuen, 5th year B C 44

S D Tsan, determined by α , β , and others in Orion

She Ke, M T L

The duration of this comet is doubtful.

50

B C 32 February.

In the reign of Chung Ta, the 1st year of the epoch Keon Cho, the 1st moon, there was a comet in Ying Shih. Its colour was a bluish white. It was from 60 to 70 cubits in length, and about 1 cubit in width.

Emperor Chung Ta, B C 32-47, epoch Keon Cho, 32-29 1st year, 1st moon, 32, February

Ying Shih, same as S D Shih, determined by α Pegasus and others M T L

51

B C 12 August 26

In the 1st year of the epoch Yuon Yam, the 7th moon, day Sin Wei, there was a comet in the eastern part of S D Tsang. Its course was towards Woo Choo Hlow. It appeared to the north of Ho Shoo, and advanced towards Hoon Yuen and Tao Wei. It afterwards progressed at the rate of about 6 degrees in a day. In the morning it was seen in the east. On the 13th day, in the evening, it appeared in the west. It passed over the Tao Fe and other neighbouring stars. It afterwards went into Ta Ho Tung, in the middle of Tao Kung. It then passed round Teon Ho, and having left the boundaries of —— Hlow it went to the south, and passed over Ta Kee and Che Te. It entered Toon She, and remained there during that lunation. It advanced slowly to the middle of Toon She, and afterwards left it to the west. On the 56th day it set with Tsang Lung.

It is greatly to be regretted, that in the original work from which this account is taken many parts of the text are so indistinct, on account of injury to the block, that not only are some of the characters entirely obliterated, but others are so imperfect as to render their translation very uncertain, as they are almost illegible.

I have done the best I could under those circumstances, and believe the translation to be substantially correct. The notice of this comet in the 'She Ke' is exceedingly brief.

Epoch Yuen Yen, B.C. 12-9 1st year, B.C. 14, 7th moon August Day Sin
Wei, August 26

S D Tuan determined by γ , ϵ , λ , μ , &c Geminorum

Woo Choo Hlow, θ , ν , τ , &c Geminorum

Hoo Choo appears to be the same as Pih Ho, α , β , &c Geminorum

Hoon Yuen, α , γ , η , and others in Leo and Leo Minor

Tzen Fa, ζ , μ , & Leonis

Other characters, possibly names of stars, occur here which are not to be found in any of the lists I have seen—they, therefore, have not been identified.

Hoo Twng not identified

Tso Kung, circle of perpetual apparition

— Hlow not identified, the preceding characters being illegible

Ta Keo, Aicturus She To, stars in the foot of Bootes

Toon Ho, the Milky Way

Tao Wai, space between stars in Leo and Virgo

Toon She, space within the stars in Scopulae

Tsang Lung, the Aswio Dragon, one of the four divisions of the heavens, comprising our signs Libra, Scorpio, and Sagittarius M T L

52

B.C. 5 March 5

In the reign of the Emperor Gao Ts, the 2nd year of the epoch Koon Ping, the 2nd moon, a comet appeared in Keen Now for about 70 days

Emperor Gao Ts, no 6-1, epoch Koon Ping, 6-3 2nd year, 2nd moon,
B.C. 5, March

Koon Now, same as S D Now, determined by α , β , &c Capricorni M T L

53

B.C. 4 April

In the 3rd year of the same epoch, the 3rd moon, there was a comet in Hoo Koo

3rd year of epoch Koon Ping, B.C. 4 3rd moon, April

Hoo Koo, α , β , γ , &c Aquila

Tung Keen

54

A.D. 13 December

In the reign of Wang Mang, the 5th year of the epoch Keen Kwo, the 11th moon, a comet appeared

Wang Mang, a chieftain who usurped the Imperial dignity A.D. 9-12

Epoch Keen Kwo, A.D. 9-13 5th year, 11th moon, A.D. 13, December

She Ke

55

A D 22 November

In the 31st year of the epoch To Hwang, the 11th moon, there was a comet in S D Chang It went to the south east After 5 days it was no longer seen

Epoch To Hwang, A D 20-22 31st year, A D 22 11th moon, November

S D Chang determined by κ , λ , μ Hydrius

She Ke, M T L

56

A D 39 March 13

In the reign of the Emperor Kwang Woo, the 15th year of the epoch Koen Woo, the 1st moon, on the day Ting Wei, a comet was seen in S D Mao. It was bright, 30 cubits in length, broad, and spreading like a tree. It went gradually to the north west. It entered Ying Shih and passed into Lo Kung. In the 2nd moon, on the day Yih Wei, it passed into the eastern part of S D Peh and disappeared. It was visible for 49 days.

Emperor Kwang Woo, A D 25-57, epoch Koen Woo, 25-55, 15th year, A D 39 1st moon, day Ting Wei, March 13, 2nd moon, day Yih Wei, April 30

S D Mao determined by the Plough

S D Peh determined by γ Pegasus and α Andromedae

S D Shih determined by α , β Pegasus, &c Ying Shih, α Pegasus

Lo Kung, three groups of stars, of two each, in Pegasus, being λ , μ , η , α , and ν , τ , and forming part of S D Shih

She Ke, M T L

57

A D 55 June 4

In the 30th year of the same epoch, in the intercalary moon, on the day Ko Woo, the planet Mercury being about 20 degrees in the eastern part of the S D Tang, a white vapour appeared, pointing to the south-east. It was bright, and 10 cubits in length. It proved to be a comet. It went to the north-east. It passed above the western boundary of Ts'e Kung. In the 5th moon, day Ko Ts'e, it was no longer visible. It was seen altogether for 31 days.

Epoch Koen Woo, A D 55 30th year, intercalary moon 'M T L' informs us that this was the intercalary 4th moon, consequently the day Ko Woo is June 4.

5th moon, day Ko Ts'e, July 4

Ts'e Kung, same as Ts'e Wei Yuon, circle of perpetual apparition

She Ke, M T L

58

A D 60 August 9

In the reign of Ming Te, the 3rd year of the epoch Yung Ping, the 6th moon, on the day Ting Mao, a comet appeared to the north of Teen Chuan. It was 2 cubits in length. It gradually went to the north, and entered the S D Kang to the south. It was visible 185 days.

Comets observed in China

Emperor Ming Te and epoch Yung Ping, A D 58-75 31st year, A D 60, 6th moon, day Ting Maou, August 9

S D Kang determined by ι , κ , λ , θ Virginis
Teen Chuen, α , γ Persei, &c.

She Ke, M T L

59 A D 61 September 27

In the 4th year of the epoch Yung Ping, the 8th moon, day Sun Yow, a strange star appeared to the north west of Kang Ho. It pointed towards Kwan Soo. It was visible for 70 days.

Epoch Yung Ping, A D 61 4th year, 8th moon, day Sun Yow, September 27
Kang Ho, δ Bootis Kwan Soo, Corona Borealis *She Ke*

60 A D 65 June 4

In the 8th year of the same epoch, the 6th moon, on the day Jin Woo, a comet appeared in the 37th degree of the S D Lew and Chang. It entered Koon Yuan and passed through Teen Chuen. It passed into Tso Wei. The vapour (tail) extended to Shang Keae. It was seen altogether for 56 days.

Yung Ping, 8th year, A D 65 6th moon, day Sun Woo, June 4.

S D Lew determined by δ , ι , and others in Hydria

S D Chang determined by κ , λ , μ , and others in Hydria.

Heen Yuen, α , γ , ι , η , and others in Leo and Leo Minor

Teen Chuen, α , γ , δ , and others in Perseus

Shang Keae, possibly stars in Virgo

Tso Wei, space between stars in Leo and Virgo

She Ke, M T L

61 A D 66 February 20

In the 9th year of the same epoch, the 1st moon, day Woo Shin, a strange star appeared in S D New. It was 8 cubits in length. It passed through Koon Sing. It arrived at the south of S D Fung and then disappeared. It was visible 50 days.

Epoch Yung Ping, A D 66 9th year, 1st moon, day Woo Shin, Feb 20

S D New determined by α , β , &c Capricorni

S D Fung determined by β , δ , π , and others in Scorpio

Keen Sing, ν , ξ , σ , and others in Sagittarius

She Ke

62 A D 71 March 6

In the 14th year of the same epoch, the 1st moon, day Woo Tso, a strange star was seen for 60 days. It appeared first in S D Maou. It went into Koon Yuan and disappeared to the right of S D Kee.

Yung Ping, 14th year, A D 71 1st moon, day Woo Tso, March 6

S D Maou determined by the Pleiades

S D Kee determined by α and ζ Virginis

Heen Yuen, α , γ , ι , η , and others in Leo and Leo Minor

She Ke

63

A.D. 75 July 14

In the 18th year of the epoch Yung Ping, the 6th moon, day Ke Wei, a comet appeared in S D Chang. It was 3 cubits in length. It turned and entered Lang Tseang. It passed into the south of Tao Wei.

Yung Ping, A.D. 75 18th year, 6th moon, day Ko Wei, July 14

S D Chang determined by α , λ , μ , and others in Hydra

Tao Wei, space between stars in Loo and Vingo

Lang Tseang, Ooma Boenices

She Ke, M T L

64

A.D. 76 August 9

In the reign of Chang Te, the 1st year of the epoch Keen Choo, the 8th moon, day Kang Yin, a comet appeared in Toon Sho. It was 3 cubits in length. It passed on slowly into 3 degrees of Keen Now. After 40 days it gradually disappeared.

Emperor Chang Te, A.D. 76-88, epoch Keen Choo, 76-83, 1st year, 76 8th moon, day Kang Yin, August 9

Keen Now for S D Now, determined by α , β , and others in Capricornus

Toon Sho, space bounded by Scorpions

She Ke, M T L

65

A.D. 77 January 23

In the same year, the 12th moon, day Woo Yin, a comet appeared in 3 degrees of the S D Lew. Its length was from 8 to 9 cubits. It slowly entered Tze Kung as far as the middle. After 106 days it gradually disappeared.

Keen Choo, 1st year, A.D. 76 12th moon, day Woo Yin, A.D. 77, January 23

S D Lew determined by α , β , γ Aurigae

Tze Kung, circle of perpetual apparition

She Ke, M T L

The 'Sho Ke' has the 11th moon of the 2nd year

66

A.D. 84 May 25

In the 1st year of the epoch Yuan Ho, the 4th moon, day Ting Sze, an extraordinary star appeared in the morning to the east. Its place was in the 18th degree of the S D Wei. It was 3 cubits in length. It passed over Ko Taou and entered Tze Kung. On the 40th day it disappeared.

Epoch Yuan Ho, A.D. 84-86 1st year, 84, 4th moon, day Ting Sze, May 25

S D Wei determined by the three stars in Musca

Ko Taou, ν , ξ , σ , π Cassiopeia

Tze Kung, circle of perpetual apparition

She Ke

67

A.D. 102 January 7

In the reign of the Emperor Ho Te, the 12th year of the epoch Yung Yuen, the 11th moon, on the day Kwei Yow, in the evening, a greenish-white vapour was seen,

Comets observed in China

about 30 cubits in length, commencing in Tsoen Yuen, to the north-east. It pointed to Koon She. It was seen altogether for 10 days.

Emperor Ho Te, A.D. 59-105, epoch Yung Yuon, 89-101 12th year, 101, 11th moon, day Kwei Yew, 102, January 7

Tsoen Yuen, ζ , κ , χ , ϕ Eridani
Koon She, β Canis Majoris

She Ke

A.D. 110 January

In the reign of the Emperor Gan Te, the 3rd year of the epoch Yung Choo, the 12th moon, a comet was seen to the south of Tsoen Yuen. It pointed towards the north east. It was 6 or 7 cubits in length, and was of a greenish white colour.

Emperor Gan Te, A.D. 107-125, epoch Yung Choo, 107-113 3rd year, 109, 12th moon, January

Tsoen Yuen, γ , δ , ϵ , and others in Eridanus

The Tsoen Yuen here mentioned must not be confounded with that in the preceding account, the characters being quite different, although of the same sound.

M T L

A.D. 131

In the reign of the Emperor Shun Te, the 6th year of the epoch Yung Keen, a comet appeared in S D Tow and Koon New. It disappeared in S D Mou and Wei.

Emperor Shun Te, A.D. 126-144, epoch Yung Keen, 126-131 6th year, 131
S D Tow determined by ζ , τ , σ , and others in Sagittarius

Koon New same as S D New, determined by α and others in Capricornus

Wei determined by α Aquarii and γ Pegan

M T L

Biot's date is 132

A.D. 141 March 27

In the 6th year of the epoch Yung Ho, the 2nd moon, day Tung Szo, a comet was seen in the east. It was 6 or 7 cubits in length. Its colour was a bluish white. It pointed south-west to Ying Shih, and extended to the stars Fun Moo. On the day Tung Chow the comet was about 1 degree in the S D Kwei. Its length was 6 cubits. On the day Kwei Hae it was seen in the morning to the north-west. It passed through the S D Mou and Peih. On the day Kee Shin it entered the eastern part of N D Tung. It went on and passed through S D Kwei and Lew, and the seven stars in Chang. It was very bright, and extended to San The. It passed into the middle of Hsun Yuen and then disappeared.

She Ke, M T L

Epoch Yung Ho, A.D. 136-141 6th year, 141, 2nd moon, day Tung Szo, March 27 Other days Tung Chow, April 16, Kwei Wei, April 22, Kee Shin, April 23

S D' Ying Shih or Shih, determined by α , β Pegasi, &c.
Maou determined by the Pleiades

- S D Path determined by α , γ , δ , &c in Taurus
 S D Kwei determined by β , δ , ϵ , &c in Andromeda and Pisces
 S D Low determined by δ , ϵ , &c Hydrus
 S D Chang determined by α , λ , μ , &c Hydrus
 Fun Moo, γ , η , π Aquarius
 Hean Yuen, α and others in Leo and Leo Minor

According to 'M T L' this comet appeared in the epoch Yung Koon, the account being in other respects precisely the same. This would make the date 10 years earlier, viz. 131, and the days would be, Ting Sze, March 20, Ting Chow, April 9, Kwei Wei, April 15, and Kea Shin, April 16.

71

A.D. 149 October 19

In the reign of the Emperor Hwan To, the 31st year of the epoch Koon Ho, the 8th moon, day Yih Chou, a bright comet, 5 cubits in length, was seen in the middle of Tsoen Shu, to the south-east. Its colour was a yellowish white. In the 9th moon, on the day Woo Shin, it was no longer seen.

Emperor Hwan To, A.D. 147-167, epoch Koon Ho, 147-149 31st year, 149, 8th moon, day Yih Chou, October 19, day Woo Shin, October 22

Toon Sho, space bounded by Scorpions

Sho Ke

'M T L' has the 1st instead of the 31st year. In the 'Sho Ke,' observations of Venus and other planets are recorded as having been made in the 1st and 2nd years of this epoch, and also in the 8th moon of the 3rd year. Those are followed by the account of the comet as above. As the text in 'M T L' is in other respects precisely similar, there is therefore no doubt as to the correctness of the year as given in the 'Sho Ke.'

72

A.D. 161 June 14

In the 4th year of the epoch Yon Ho, the 5th moon, on the day Sun Yew, a strange star was seen in Ying Shih. It progressed slowly. The tail became 5 cubits in length. It passed into the 1st division of N Iu Min. It turned and appeared as a comet.

Epoch Yon Ho, A.D. 158-166 4th year, 161, 5th moon, day Sun Yew, June 14
 N Iu Ying Shih, or Shuh, determined by a Pegasus, &c.
 S D Sun, determined by α , σ , τ in Scorpio

Sho Ke, M T L

73

A.D. 178 September,

In the reign of the Emperor Tang To, the 1st year of the epoch Kwang Ho, the 8th moon, a comet appeared in the north of S D Kang. It passed into the middle of Toon Sho. It measured a cubit in length. It gradually increased in length until it measured from 50 to 60 cubits. Its colour was reddish. It passed through about 10 stellar divisions in about 80 days, and then disappeared in the middle of Toon Yuan.

Emperor Lang Tsu, A.D. 168-189, epoch Kwang Hoo, 178-183 1st
8th moon, September

S D Kang determined by ν, ε, λ, θ Virginis

Tseen Shoo, space bounded by Serpens

Tseen Yuen, γ, δ, ε, and others in Eridanus

She Ke,

74

A.D. 180

In the 3rd year of the same epoch a comet appeared to the east of Lang
entered into S D Chang and then disappeared

Epoch Kwang Hoo, 3rd year, A.D. 180

S D Chang determined by ε, λ, μ, &c Hydrus

Lang Hoo, Sirius and other stars in Canis Major

She Ke,

75

A.D. 182 August

In the 5th year of the same epoch, the 7th moon, a comet appeared before
Tao It went to the east It entered Tseen Wei It passed Tao Tsoe and II
In about 20 days it disappeared

Kwang Hoo, 5th year, A.D. 182 7th moon, August

San Tao, the stars in the feet of Ursa Major

Tao Wei, space between Vulgo and Leo

Tao Tsoe, E Leonis

Hing Chin, a star in Coma Berenices, near E Leonis

'M T L' has the 4th year of this epoch, A.D. 181

76

A.D. 185 December 7

In the 2nd year of the epoch Chung Ping, the 10th moon, on the day K
strange star appeared in the middle of Nan Mun It was like a large bamboo
displayed the five colours, both pleasing and otherwise It gradually lessened
6th moon of the succeeding year it disappeared

Epoch Chung Ping, A.D. 184-189 2nd year, 185, 10th moon, day K
December 7, A.D. 186 6th moon, July

Nan Mun, a Centaur and stars near

Biot's date is December 10, 173, and his epoch is Cho Ping In the
the epoch is precisely as here given, and no epoch Cho Ping is to be found
this time in the Tables The epoch in which the year 173 occurs is I
but no comet or extraordinary star is recorded in the 'She Ke' as having
at that time Biot's day would be quite correct for A.D. 173, but is not so
No comet is to be found in 'M T L' or the 'Tung Keen' under either
dates

77

A D 188 March

In the 5th year of the same epoch, the 2nd moon, a comet appeared in S D Kwei It went the contrary way and entered Tseu Kung After having been seen for about 60 days it disappeared

Chung Ping, 5th year, A D 188 2nd moon, March

S D Kwei determined by β , δ , ϵ Andromeda and stars in Pisces

Tseu Kung, the circle of perpetual apparition

Sho Ko

In 'M T L' the account of this comet is placed under the epoch Kwang Ho, and Chung Ping does not appear as an epoch, but Kwang Ho occurs twice as an epoch, which is unusual It appears, therefore, that there is a typographical error in 'M T L,' and that Chung Ping should have been substituted for Kwang Ho This would make the 'Sho Ko' and 'M T L' consistent with each other

78

A D 188 July 29

In the 6th moon of the same year, day Ting Maou, a strange star, like a 3-shing measure, appeared in Kwan Soo It went to the south west It entered Toon Sho, passed on to S D Wei, and disappeared

A D 188 6th moon, day Ting Maou, July 29

S D Wei determined by ϵ , μ , ν , and others in Scorpio

Toon Sho, space bounded by Scorpions

Kwan Soo (also called Shih Soo), Corona Borealis

Sho Ko

A shing is described as a certain measure, containing 120,000 grains of millet

Biot dates this comet, Kwang Ho, 5th year, 6th moon, 182, June 30 As in the former instance, the date I have given is that of the 'Sho Ko' Three comets are recorded in the 'Sho Ko,' under the epoch Kwang Ho, which are not in Biot they occur in the 1st (B C 178), the 3rd (B C 180), and 5th (B C 182) years of that epoch In the 'Tung Koon Kang Muh' they are also given under the epoch Kwang Ho, as well as that of the 5th year of Chung Ping (B C 188, July), also not in Biot That of the 2nd year, and the present one, do not occur in the 'Tung Koon' under the epoch Chung Ping They are not in 'M T L'

79

A D 192 October

In the reign of the Emperor Hien Te, the 3rd year of the epoch Choo Ping, the 9th moon, a comet was seen It was about 100 cubits in length Its colour was white It appeared to the south of the S D Koo and Kang

Emperor Hien Te, A D 190-220, epoch Choo Ping, 190-193 9th moon, October

S D Koo determined by α Virginis and another

S D Kang determined by ι , κ , λ , μ , ρ Virginis

M T L

80

A D 193 November

In the 4th year of the same epoch, the 10th moon, a comet appeared between the two Koes. It went to the north east. It entered Tsoo She as far as the middle, and disappeared.

Choo Ping, 4th year, 193 10th moon, November

The two Koes S D Kao determined by a Virginis and another Th Kao, Arcturus

Teen She, the space bounded by Serpens

She Ke, M T L

81

A D 200 November 7

In the 5th year of the epoch Koon Gan, the 10th moon, day Sin Ilac, there was a comet in Ts Leang

Epoch Keen Gan, A D 196-220 5th year, 200, 10th moon, day Sin Ilac, November 7th

Ts Leang, unascertained

M T L

82

A D 204 December

In the 9th year of the same epoch, the 11th moon, a comet appeared in the eastern part of S D Tang, near to S D Kwei. It entered Hien Yuen and Tso Wei.

Epoch Keen Gan, 9th year, A D 204 11th moon, December

S D Tang determined by δ, ε, λ, &c Geminorum

S D Kwei determined by γ, δ, η, θ Canceris

Hien Yuen, α and others in Leo and Loo Minor

Tso Wei, space in Leo and Virgo

She Ke, M T L

83

A D 206 February

In the 11th year, 1st moon, there was a comet in Pih Tow. The head was in the middle of that asterism. It was also seen in S D Wei, in Kwan, and in Tsoo Kung, and in the morning it extended towards the north.

Keen Gan, 11th year, A D 206 1st moon, February

S D Wei determined by ε, μ, ν, and others in Scorpio

Kwan, possibly Corona Borealis

Tsoo Kung, called of perpetual apparition

Pih Tow, the seven bright stars in Ursa Major

She Ke, M T L

84

A D 207 November 10

In the 12th year, 10th moon, day Sin Maou, there was a comet in Shun Wei.

Koon Gan, 12th year, A D 207 10th moon, day Sin Maou, November 10

Shun Wei, one of the twelve kung, or signs, answering to Virgo

She Ke, M T L

85

A D 213 January

In the 17th year, 12th moon, there was a comet in Woo Choo How

Koon Gan, 17th year, A D 213 12th moon, January

Woo Choo How, θ, i, ν, τ, φ Geminorum

She Ko, M T L

86

A D 218 April

In the 23rd year of the same epoch, in the 3rd moon, a comet was seen in the morning, in the east, for about 20 days. In the evening it appeared in the west. It entered and passed through Woo Chay, Tung Tsing, Woo Choo How, Wan Chang, Hien Yuen, How Fe, and Tao Wei. It was pointed and bright. Its course was towards Te Tso.

Koon Chan, 23rd year, A D 218 3rd moon, April

Woo Chay, α, β, γ, Δηνιγον, and β Ταυι

Tung Tsing, the eastern part of S D Tsing, determined by δ, ε, λ, &c Geminorum

Woo Choo How, θ, i, ν, τ, φ Geminorum

Wan Chang, θ, φ, ν Ουεσο Μαζονις

Hien Yuen, α and others in Loo and Loo Minor

How Fe, unascertained

To Tso, α Ηαιριδης

Tao Wei, space between stars in Loo and Virgo

She Ko, M T L

87

A D 236 November

In the reign of How Choo, the 14th year of the epoch Koon Hing, there was a comet in the east.

How Choo, 223-264, epoch Koon Hing, 223-237 14th year, 236, 10th moon, November

For further particulars respecting this comet see No. 91.

At the close of the Han dynasty China was divided into three principal states, Wei, Woo, and Shuh. This was the celebrated period of the San Kwo, or Three Nations. The Shuh was a branch of the Han, and under the name of the How, or later Han, has a place among the regular dynasties. It maintained the supremacy until A D 264, when the Wei, until then a minor state, obtained the supremacy, and founded a new dynasty, under the name of the Tsin. The comets which immediately follow are those observed during the Wei, A D 220-264, and the Tsin, 265-419. These are succeeded by the comets observed during the Sung, Tao, Liang, Chin, and Suy dynasties, embracing the period between A D 420 and 617, when the Tang dynasty obtained the supremacy.

Wei, a Minor State, A D 220-264

88

A D 222 November 4

In the reign of Wan Te, the 3rd year of the epoch IIwang Choo, the 9th moon, day Koa Shin, a strange star was seen in Tae Wei, to the left, within Yih Mun

Wan Te, A D 220-226, epoch, IIwang Choo, 220-226 3rd year, 222, 9th moon, day Koa Shin, November 4th

Tae Wei, space bounded by stars in Leo and Virgo

Yih Mun, space between γ and β Virginis

She Ke

89

A D 225 December 9

In the 6th year of the same epoch, the 10th moon, on the day Yih Wei, there was a comet in Shaou Wei. It passed through Hoen Yuan

Epoch IIwang Choo, 6th year, A D 225 10th moon, day Yih Wei, Dec 9

Shaou Wei, same as Tae Wei, space between stars in Leo and Virgo

Hoen Yuan, α and others in Leo and Leo Minor

M T L

90

A D 232 December 4

In the reign of Ming Te, the 6th year of the epoch Tae Ho, the 11th moon, day Ping Yin, there was a comet in S D Yih, near the star Shang Tseang in Tae Wei

Ming Te, A D 227-239, epoch Tae Ho, 227-232 6th year, 232, 11th moon, day Ping Yin, December 4th

S D Yih determined by α and others in Crater

Tae Wei, space between stars in Leo and Virgo

Shang Tseang, γ Virginis

She Ke, M T L

91

A D 236 November 30

In the 4th year of the epoch Tsing Lung, the 10th moon, on the day Koa Shin, there was a comet in Ta Shin. It was 3 cubits in length. On the day Yih Yow the comet was in the east. In the 11th moon, day Yih Hao, the comet was seen passing near the stars IIwan Chay and Teon Ko

Epoch Tsing Lung, A D 233-236 4th year, 236, 10th moon, day Koa Shin, November 30th, days Yih Yow, December 1st, Yih Hao, 237, January 20th

Ta Shin The Commentary minimates that Ta Shin is the same as Teon Wang—Polaris

IIwan Chay, small stars in head of Ophiuchus

She Ke, M T L

Teon Ka, small stars near θ Herculis

The 'She Ke' has Ko Hao for Yih Hao, which would be 236, December 15

This appears to be the same comet as No 87

92

A D 238 September

In the 2nd year of the epoch King Choo, the 8th moon, a comet was seen in S D Chang. It was 3 cubits in length. It went backwards towards the west. On the 41st day it disappeared.

Epoch King Choo, A D 237-239 2nd year, 238, 8th moon, September
S D Chang determined by κ , λ , μ , &c Hydri She Ke, M T L

93

A D 238 November 29

In the 10th moon of the same year, on the day Kwoi Sze, a strange star was seen in S D Wei. It went the contrary way. Its place was to the north of Lo Kung, and to the south of Tang Shay. On the day Koo Shin it was near the star Tsung, on the day Ko Yow it disappeared.

King Choo, 2nd year, A D 238 10th moon, day, Kwoi Sze, November 29th
Koo Shin, December 10th, Ko Yow, December 15th

S D Wei determined by α Aquarii and θ , ϵ Pegasus
Lo Kung, three groups of two stars, each in Pegasus, with α and β Pegasus
they form S D Shih

Tang Shay, stars in Cygnus, Lacerta, and Andromeda

Tsung Ting, small stars in head of Taurus Poniatowski

She Ke

94

A D 240 November 5

In the 1st year of the epoch Chung Cho, day Yih Yow, a comet was seen in the west. Its place was in S D Wei. It was 20 culms in length. It passed through S D Now, near to Tuo Pih. In the 11th moon, day Koo Tsao, it entered Yu Lan.

Emperor Fai To, A D 240-253, epoch Chung Cho, 240-248, 1st year, A D 240,
10th moon, day Yih Yow, Nov 5th, 11th moon, day Koo Tsao, Dec 14th

S D Wei determined by ϵ , μ , ν , &c in Scorpio

S D Now determined by ζ , τ , ζ , &c in Sagittarius

Tuo Pih, the planet Venus

Yu Lan, δ , τ , χ and others in Aquarius and Pisces

She Ke, M T L

95

A D 245 September 18

In the 6th year of the same epoch, the 8th moon, day Woo Woo, a comet was seen among the seven stars of S D Sing. It was 2 cubits in length. Its colour was white. It passed into the S D Chang. After 23 days it disappeared.

Chung Cho, 6th year, A D 245 8th moon, day Woo Woo, September 18th

S D Sing determined by the seven stars in a Hydri and others near

S D Chang determined by κ , λ , μ , &c in Hydri

She Ke, M T L

96

A D 247 January 16

In the 7th year of the same epoch, the 11th moon, on the day Kwei Hse, a comet was seen in S D Chin. It was 1 cubit in length. It was visible for 156 days, and then disappeared.

Ching Che, 7th year, A D 246 11th moon, day Kwei Hse, 247, Jan 16th
 S D Chin determined by β and others in Corvus She Ke, M T L

'M T L' has 56 instead of 156 days, during which the comet was seen, in which he is followed by Biot, and which appears to be the more probable number. The 'She Ke' is as above.

97

A D 248 April

In the 9th year of the same epoch, the 3rd moon, there was (a comet) seen in S D Muou. It was 6 cubits in length. Its colour was a bluish white. The tail pointed to the south-west. In the 7th moon it was seen in S D Yih, and was 2 cubits in length. It passed into S D Ohm after 42 days it disappeared.

Ching Che, 9th year, A D 248 3rd moon, April, 7th moon, August
 S D Muou determined by the Pleiades
 Yih determined by α , &c Crateris
 Chin determined by β , &c Corvi She Ke, M T L

98

A D 251 December 21

In the 3rd year of the epoch Kao Ping, the 11th moon, day Kwei Hse, there was a comet in Ying Shih. It went to the west, and was visible for 90 days, when it disappeared.

Epoch Kao Ping, A D 249-253 3rd year, 251, 11th moon, day Kwei Hse, December 21st

S D Ying Shih, same as Shih, determined by α , β Pegasi, &c

She Ke, M T L

99

A D 252 March 25

In the 4th year of the same epoch, the 2nd moon, day Ting Yow, a comet was seen in the west. Its place was in S D Wei. It was from 50 to 60 cubits in length. Its colour white. The tail pointed to the south, passing through S D Tuan. It was visible for 20 days, and then disappeared.

Epoch Kao Ping, 4th year, 252 2nd moon, day Ting Yow, March 25th
 S D Wei determined by the three stars in Musca

S D Tuan determined by α , β , &c Oramis She Ke, M T L

100

A D 253 December

In the 5th year of the same epoch, the 11th moon, a comet was seen in S D Chin. It was 50 cubits in length. Its place was in Tao Wu, to the left of Tsu Cho Fa. It pointed towards the south east. It was visible for 190 days, when it disappeared.

Kan Ping, 253 5th year, 11th moon, December
 S D Chin determined by β , &c Corvi
 Tao Wei, space between stars in Leo and Virgo
 Tso Cho Fu, η Virginis

She Ke, M T L

101

A D 255 February

In the reign of Shaou Te, the 2nd year of the epoch Ching Yuon, the 1st moon, there was a comet in Woo Yue, to the north-west, in the horizon

Emperor Shaou Te, A D 254-259, epoch Ching Yuon, 254-255 2nd year, 1st moon, 255, February
 Woo Yue, ζ Aquila

She Ke, M T L

102

A D 257 December

In the 2nd year of the epoch Kan Loo, the 11th moon, a comet was seen in S D Koo Its colour was white

Epoch Kan Loo, A D 256-259 2nd year, 11th moon, December
 S D Koo determined by α and another in Virgo

She Ke, M T L

103

A D 259 November 23

In the 4th year of the same epoch, 10th moon, day Ting Chow, a strange star was seen in the middle of Tao Wei It turned and went to the south-east It passed through S D Chin It was altogether visible for 7 days, and then disappeared

Kan Loo, 4th year, A D 259 10th moon, day Ting Chow, November 23d
 Tao Wei, space in Leo and Virgo
 S D Chin determined by β and others in Corvus

She Ke

104

A D 262 December 2

In the reign of Yuen Te, the 3rd year of the epoch King Yuon, 11th moon, day Jin Yin, a comet was seen in S D Kang Its colour was white It was $\frac{4}{5}$ ths of a cubit in length It went to the north After 45 days it disappeared

Emperor Yuen Te, A D 260-265, epoch King Yuon, 260-263 3rd year, 262, 11th moon, day Jin Yin, December 2d
 S D Kang determined by ι , κ , λ , θ Virginis

She Ke, M T L

105

A D 265 June

In the 2nd year of the epoch Huan Ho, the 5th moon, a comet was seen in Wang Loang Its length was about 10 cubits Its colour was white It pointed towards the south east After 12 days it disappeared

Epoch Huan Ho, A D 264-265 2nd year, 5th moon, 265, June
 Wang Loang, α , β , η , κ Cassiopeia

She Ke, M T L

The Wei having obtained the superiority adopted the name of Tsin, and founded the

TSIN DYNASTY, A.D. 265-419

106

A.D. 268 February 18

In the reign of the Emperor Woo Ta, the 4th year of the epoch Tao Che, the 1st moon, day Ping Seuh, a comet was seen in S D Chin. Its colour was a bluish white. It went to the north-west, but afterwards turned and went to the east.

Emperor Woo Ta, A.D. 265-289, epoch Tao Che, 265-274 4th year, 268, 1st moon, day Ping Seuh, February 18th

S D Chin determined by β and others in Corvus

She Ke, M T L

107

A.D. 275 January

In the 10th year of the same epoch, the 12th moon, there was a comet in S D Chin

Epoch Tao Cho, 10th year, 274 12th moon, 275, January

S D Chin determined by β and others in Corvus

108

A.D. 276 June 24

In the 2nd year of the epoch Huan Ning, the 6th moon, on the day Koo Souh, there was a comet in S D To. In the 7th moon the comet was near Tu Koo. In the 8th moon the comet was in Tse Wei. It passed into S D Yih, and also into Pih Tow and San Tao.

Epoch Huan Ning, A.D. 275-279 2nd year, 276, 6th moon, day Koo Souh, June 24, 7th moon, July, 8th moon, August

S D To determined by α , β , γ , &c Librae

S D Yih determined by α and others in Crater

Tu Koo, Arcturus Pih Tow, the seven bright stars in Ursa Major

San Tao, the stars in the foot of Ursa Major

She Ke, M T L

In the original this account is divided into three parts, separated by astrological inferences. There is no doubt but that they relate to one comet. The S D also are here considered as extending to the Polo. The same remarks apply to the next two comets.

109

A.D. 277 February

In the 3rd year of the same epoch, the 1st moon, there was a comet in the west. In the 3rd moon it was in S D Wei. In the 4th moon the comet was in Nou Yu. In the 5th moon it was in the east. In the 7th moon it was in Tse Kung.

Epoch Huan Ning, 3rd year, A.D. 277 1st moon, February, 3rd moon, April, 4th moon, May, 5th moon, June, 7th moon, August

S D Wei determined by the three stars in Musca

Nou Yu, w Leonis

Tse Kung, circle of perpetual apparition

She Ke, M T L

110

A D 279 April

In the 5th year of the same epoch, the 3rd moon, there was a comet in S D Lew
 In the 4th moon the comet was in Now Yu. In the 7th moon the comet was in Tse Kung

Han Ning, 5th year, A D 279 3rd moon, April, 4th moon, May, 7th moon,
 August

S D Lew determined by δ , ϵ , &c Hydri Now Yu, π Loomis
 Tse Kung, circle of perpetual apparition She Ke, M T L

There is evidently here some confusion in the original text, as the observations
 of the 4th and 7th moons are precisely the same as the observations of the pre-
 preceding comet in the 4th and 7th moons of its appearance. It is, however, the same
 both in the 'She Ke' and 'M T L'

111

A D 281 September

In the 2nd year of the epoch Tse Kung, the 8th moon, there was a comet in
 S D Chang

Epoch Tse Kung, A D 280-289 2nd year, 281, 8th moon, September
 S D Chang determined by κ , λ , μ , &c Hydri She Ke, M T L

112

A D 281 December

In the 11th moon of the same year there was a comet in Heen Yuen

A D 281, 11th moon, December
 Heen Yuen, a and other stars in Leo and Leo Minor She Ke, M T L

113

A D 283 April 22

In the 4th year of the same epoch, the 3rd moon, day Woo Shun, there was a comet
 in the south west

Tse Kung, 4th year, A D 283 3rd moon, day Woo Shun, April 22
 She Ke, M T L

114

A D 287 September

In the 8th year of the same epoch, the 9th moon, there was a comet in Nan Tow
 Its length was reckoned at 100 cubits. In about 10 days it disappeared

Tse Kung, 8th year, A D 287 9th moon, September
 Nan Tow, same as S D Tow, determined by ζ , τ , σ , &c Sagittarii
 She Ke, M T L

115

A D 290 May

In the 1st year of the epoch Tae Ho, the 4th moon, there was a strange star in Tae Kung

Epoch Tae Ho, A D 290 In the Tables this epoch is written Yung Ho, and is made the 1st of the Emperor Hwuy Te 4th moon, May

Tae Kung, circle of perpetual apparition

She Ke, M T L

116

A D 296 May

In the 15th year of Hwuy Te, the 5th year of the epoch Yuen Kang, the 4th moon, there was a comet in S D Kwei It passed into Heen Yuen and Tao Wei It crossed San Tse and Tu Lung

Emperor Hwuy Te, A D 290-306, epoch Yuen Kang, 291-299 5th year, 296 4th moon, May

S D Kwei determined by β , δ , ϵ , &c Andromeda and stars in Pisces

Heen Yuen, α and others in Leo and Leo Minor

Tao Wei, space between stars in Leo and Virgo

San Tse, stars in foot of Ursa Major Tu Lung, γ and others in Pisces

She Ke, M T L

117

A D 300 April

In the 1st year of the epoch Yung Kang, 3rd moon, a strange star was seen in the south

Epoch Yung Kang, A D 300 3rd moon, April

She Ke

Possibly a meteor

118

A D 301 January.

In the 12th moon of the same year a comet appeared in S D New, to the west It pointed to Thon She

A D 300, 12th moon, 301, January

S D New determined by α , β , &c Capricorni

She Ke, M T L

119

A D 301 May

In the 2nd year of the same epoch, 4th moon, a comet was seen near the star Tso

Yung Kang, 2nd year, 301 4th moon, May

Star Tso, II Hercules

She Ke, M T L

120

A D 302 May

In the 1st year of the epoch Tso Gan, the 4th moon, a comet was seen in the dayzimo

Tso Gan, 302-303, 1st year, 4th moon, 302, May

She Ke, M T L

121

A D 303 April

In the 2nd year of the same epoch, the 31st moon, a comet was seen in the east. It pointed towards San Tow.

The Gan, 2nd year, A D 303 31st moon, April
San Tow, the stars in foot of Ursa Major

She Ke, M T L

122

A D 304 May

In the 1st year of the epoch Yung Ilung, the 5th moon, there was a strange star in S D Poh.

Epoch Yung Ilung, A D 304-305 1st year, 304 5th moon, May
S D Poh determined by α , γ , δ , &c Tauri

She Ke

123

A D 305 September

In the 2nd year of the same epoch, the 8th moon, there was a comet in S D Maou and Poeh.

Yung Ilung, 2nd year, 8th moon, A D 305, September
S D Maou determined by the Pleiades
S D Poeh determined by α , γ , δ , ϵ , &c Tauri

She Ke, M T L

124

A D 305 November 21

In the 10th moon of the same year, on the day Tung Chow, there was a comet in Pih Tow, near the star Souen Ko.

A D 305, 10th moon, day Tung Chow, November 21st
Pih Tow, the seven bright stars in Ursa Major
Souen Ko, same as Toon Ko, γ Ursa Majoris

She Ke, M T L

125

A D 329 August

In the reign of Ching To, the 4th year of the epoch Huan Ho, the 7th moon, there was a comet in the north west. It entered into S D Tow. After 23 days it disappeared.

Emperor Ching To, A D 326-342, epoch Huan Ho, 326-334 4th year, 329
7th moon, August

S D Tow determined by ζ , τ , σ , ϕ , &c Sagittarii

She Ke, M T L

126

A D 336 February 16

In the 2nd year of the epoch Huan Kang, 1st moon, day Sun Sze, a comet was seen in the evening, in the west. Its place was in S D Kwei.

Epoch Huan Kang, A D 335-342 2nd year, 336 1st moon, day Sun Sze, Feb 16
S D Kwei determined by β , δ , ϵ , &c Andromedae and others in Pisces

She Ke, M T L

'M T L' has the 2nd moon, March, but no day Sun Sze occurs in March in that year.

127

A D 340 March 5

In the 2nd moon of the 6th year of the same epoch, day Kang Shun, there was a comet in Tse Wei

Epoch Han Kang, 6th year, 340 2nd moon, day Kang Shun, March 5th
Tse Wei, space between stars in Leo and Virgo *She Ke, M T L*

128

A D 343 December 8

In the reign of the Emperor Kang Te, the 1st year of the epoch Keen Yuon, the 11th moon, 6th day, a comet was seen in S D Kang. Its length was 7 cubits. Its colour was white.

Emperor Kang Te and epoch Keen Yuon, A D 343-344 1st year, 313 11th moon, 6th day, December 8th

S D Kang determined by ι , κ , λ , θ Virginis *She Ke, M T L*

129

A D 349 November 23

In the reign of Mu Te, the 5th year of the epoch Yung Ho, the 11th moon, day Yih Mao, a comet was seen in S D Kang. It was bright, and directed towards the west. Its colour was white. It was 10 cubits in length. In the 1st moon of the 6th year, on the day Ting Chow, the comet was still visible in H D Kang.

Emperor Mu Te, A D 345-361, epoch Yung Ho, 345-356 5th year, 349, 11th moon, day Yih Mao, 349, November 23rd, 6th year, 350 1st moon, day Ting Chow, February 13th

S D Kang determined by ι , κ , λ , θ Virginis *She Ke, M T L*

130

A D 358 July 1

In the 2nd year of the epoch Shung Ping, the 5th moon, day Ting Ho, a comet was seen in Tseen Chuen, in S D Wei.

Epoch Shung Ping, A D 357-361 2nd year, 358 5th moon, day Ting Ho, July 1

Tseen Chuen, γ , η Piscis
S D Wei determined by the three stars in Muson *She Ke, M T L*

131

A D 363 August

In the reign of Gao Te, the 1st year of the epoch Hing Ning, the 8th moon, there was a comet in S D Koo and Kang. It entered the boundary of Toon She.

Emperor Gao Te, A D 362-365, epoch Hing Ning, 363-365 1st year, 363 8th moon, August

S D Koo determined by a Virginis and another.

S D Kang determined by ι , κ , λ , θ Virginis

Tseen She, space bounded by Serpens

She Ke, M T L

132

A.D. 369 March

In the reign of Te Yih, the 4th year of the epoch Tae Ho, the 2nd moon, a strange star was seen in Tae Kung, near its western boundary. In the 7th moon it disappeared.

Emperor Te Yih and epoch Tae Ho, A.D. 366-370 4th year, 369 2nd moon, March

Tae Kung, circle of perpetual apparition

She Ke

133

A.D. 373 March 9

In the reign of the Emperor Hsao Woo, the 1st year of the epoch Ning Kang, the 1st moon, day Ting She, there was a comet in S D Neu, Heu, Te, Kang, Kee, Ohn, Yih, and Chang. In the 2nd moon, day Ping Souh, the comet was seen in S D Te. In the 9th moon, day Ting Chow, the comet was in Teen She.

Emperor Hsao Woo, A.D. 373-396, epoch Ning Kang, 373-375 1st year, 373, 1st moon, day Ting She, March 9th, 2nd moon, day Ping Souh, April 7th, 9th moon, day Ting Chow, September 25th

S D Neu determined by ϵ , μ , &c Aquarii

Heu determined by β Aquarii and others

Te determined by α , β , &c Librae

Kee determined by α and ξ Virginis

Kang determined by ι , κ , λ , θ Virginis

Chun determined by β , &c Ophiuchi

Yih determined by α and others in Crater

Chung determined by κ , λ , μ Hydrius

Teen She, the space bounded by Scorpions

M T L

The 'She Ke' has this comet under the 2nd year, 1st and 3rd moons. This would make A.D. 374, February and March.

134

A.D. 386 April

In the 11th year of the epoch Tao Yuan, the 31st moon, there was a comet in Nan Tow. It was visible until the 6th moon, when it disappeared.

Epoch Tao Yuan, A.D. 376-396 11th year, 386, 31st moon, April 6th moon, July

Nan Tow, same as S D Tow, determined by λ , μ , ϕ , σ , &c Sagittarii

She Ke

135

A.D. 390 August 22

In the 15th year of the same epoch, the 7th moon, day Jin Shun, there was a comet in Pih Ho. It crossed Tae Wei, San Tue, and Wan Chung. It entered Pih Tow. Its colour was white. It was about 100 cubits in length. In the 8th moon, on the day Woo Souh, it entered Tae Wei and disappeared.

Tae Yuen, 15th year, A.D. 390 7th moon, day Jim Shin, August 22nd, day
 Woo Souh, September 17th
 Pih Ho, α , β , &c Geminorum
 The Wei, space between stars in Leo and Virgo
 San Tae, stars in foot of Ursa Major
 Wan Chang, θ , v , ϕ Ursa Majoris
 Pih Tow, the seven bright stars in Ursa Major
 Tae Wei, circle of perpetual apparition

She Ke, M T L

136

A.D. 393 March

In the 18th year of the same epoch, the 2nd moon, a strange star appeared in the middle of S D Sung. In the 9th moon it disappeared.

Tae Yuen, 18th year, A.D. 393 2nd moon, March, 9th moon, October
 S D Sung determined by α , τ , &c Hydri

She Ke

137

A.D. 400 March 19

In the reign of Gan Te, the 4th year of the epoch Lung Gan, the 2nd moon, day Ke Chow, there was a comet in S D Kwei. It was more than 30 cubits in length. It was above Ko Tuou, in the western part of Tze Kung. It entered Pih Tow Kwei. It passed on to San Tae. In the 3rd moon it entered Tae Wei, Te Tao, and Twin Mun.

Emperor Gan Te, A.D. 397-418, epoch Lung Gan, 397-400 4th year, 400 2nd moon, day Ke Chow, March 19, 31st moon, April

S D Kwei determined by β , δ , ϵ Andromedae and stars in Pisces

Ko Tuou, δ , ϵ , and others in Casiopaea

Tze Kung, circle of perpetual apparition

Pih Tow, the seven bright stars in Ursa Major

San Tae, stars in the foot of Ursa Major

Tae Wei, space between stars in Leo and Virgo

Te Tao, or Woo Te Tao, β Leonis and stars near

Twin Mun, possibly Teon Mun, between β and η Virginis *She Ke, M T L*

138

A.D. 401 January 2

In the 12th moon of the same year, on the day Woo Yin, there was a comet in Shih Soo, Teon She, and Teon Tsin

A.D. 400 12th moon, day Woo Yin, 401, January 2nd

Shih Soo, Corona Borealis

Teon She, space bounded by Scorpions

Teon Tsin, α , β , ϵ , &c Cygni

139

A D 402 November 12

In the 1st year of the epoch Yuon Hing, the 10th moon, a strange star appeared. Its colour was white. It resembled a handful of meal. Its place was to the west of Tao Wei. In the 12th moon it entered Tao Wei.

Epoch Yuon Hing, A D 402-404, 1st year, 402 10th moon, November, 12th moon, January, 403

Tao Wei, space between stars in Leo and Virgo

She Ke

140

A D 415 June 24

In the 11th year of the epoch E Ho, the 5th moon, day Koa Shin, two comets appeared in Teen She. They swept To Tso. They were in the north of S D Fang and Sin.

Epoch E Ho, A D 405-418 11th year, 415 5th moon, day Koa Shin, June 24
S D Fang determined by β , δ , &c in Scorpio

Sin determined by α , σ , τ in Scorpio

Teen She, space bounded by Scorpions

To Tso, a Herculis

She Ke, M T L

141

A D 418 September 15

In the 14th year of the same epoch, 5th moon, day Kung Tso, there was a comet in Pih Tow Kwei, towards the middle. In the 7th moon, day Kwoi Hoo, the comet appeared in the western part of Tao Wei, above Juy Ke, and below the star Lening. It was bright, and gradually lengthened until it was about 100 cubits in length. In its course it swept Pih Tow, Tao Wei, and Chung Tee.

E Ho, 14th year, A D 418 7th moon, day Kwoi Hoo, September 15th

Tao Wei, space between stars in Leo and Virgo

Juy Ke unascertained

Scang. Several stars having this name occur in Tao Wei. One of these, to the west, is possibly that here referred to.

Pih Tow, the seven bright stars in Ursa Major. Kwoi in Pih Tow is referred to the square in the same.

Chung Tee, λ , μ Ursa Majoris

Tao Wei, circle of periphal apparition

She Ke, M T L

142

A D 419 February 7

In the reign of Kung Te, the 1st year, 1st moon, day Woo South, there was a comet in the western boundary of Tao Wei.

Emperor Kung Te and 1st year, 419 1st moon, day Woo South, Feb 17

Tao Wei, space between stars in Leo and Virgo *She Ke, M T L*

Kung Te was the last Emperor of the Chin dynasty. He reigned but one year, and was succeeded by the Sung.

THE EARLY SUNG DYNASTY, A.D. 420-478

143

A.D. 422 March 21

In the reign of Woo Te, the 3rd year of the epoch Yung Choo, the 2nd moon, day Ping Shuh, a comet was seen in S D Hsu and Wei

Emperor Woo Te and epoch Yung Choo, A.D. 420-422 3rd year, 422

S D Hsu determined by β Aquarii and another

S D Wei determined by α Aquarii and θ , Pegasus

144

A.D. 422 December 17

In the 11th moon of the same year, on the day Woo Woo, there was a comet in Ying Shih

422, 11th moon, day Woo Woo, December 17th

Yung Shih, same as S D Shih, determined by α and others in Pegasus

145

A.D. 423 February 13

In the reign of Shaou Te, the 1st year of the epoch King Ping, the 1st moon, day Yih Maou, there was a comet in the eastern part of H D Poih

Emperor Shaou Te and epoch King Ping, A.D. 423 1st moon, day Yih Maou, February 13th

S D Peih determined by γ Pegasus and α Andromedae She Ke, M T L

146

A.D. 423 October 15

In the 10th moon of the same year, on the day Ko Wo, there was a comet in S D Te

423, 10th moon, day Ko Wo, October 15th

S D Te determined by α , β , γ , ν Librae She Ke, M T L

147

A.D. 442 November 1

In the reign of Wan Te, the 19th year of the epoch Yuan Kao, the 9th moon, day Ping Shin, there was a strange star in Pi-h Tow. It became a comet, and entered Wan Chang, Kwan and Woo Chay. It swept S D Poih. It passed near Teon Tao. It crossed Teon Yuen. In the winter it disappeared.

Emperor Wan Te and epoch Yuan Kao, A.D. 424-453 19th year, A.D. 442
9th moon, day Ping Shin, November 1st

S D Peih determined by α , γ , δ and others in Taurus

Pi-h Tow, the seven bright stars in Ursa Major

Kwan or Shih, Corona Borealis. Wan Chang, θ , ϕ , ν Ursa Majoris

Woo Chay, α , β , θ , κ Aurigae and β Tauri

Teon Tao, π , ρ and others in Taurus, near the Hyades

Teon Yuen, γ , δ , ϵ and others in Eridanus

She Ke, M T L

148

A D 449 November 11

In the 26th year of the same epoch, 10th moon, day Kwei Maou, a comet was seen in Tae Wei

Yuen Kee, 26th year, 449 10th moon, day Kwei Maou, November 11th
Tae Wei, space between stars in Leo and Virgo She Ke, M T L

149

A D 451. May 17

In the 28th year of the same epoch, the 4th moon, day Yih Maou, a comet was seen in S D Maou. In the 6th moon, day Jin Tso, it was seen in the middle of Tae Wei, over against Te Tao

Yuen Kee, 28th year, A D 451 4th moon, day Yih Maou, May 17th 6th
moon, day Jin Tso, July 13th

S D Maou determined by the Pleiades
Tae Wei, space between stars in Leo and Virgo
To Tao, β Leonis and small stars near She Ke, M T L
The 'She Ke' has the day Ke Maou, June 10th

TSU DYNASTY, A D 479-501

150

A D 501 February 13

In the reign of Tung Hwan Hlow, in the 31st year of the epoch Yung Yuem, 1st moon, day Yih Sze, a tailed star was seen in the horizon

Emperor Tung Hwan Hlow and epoch Yung Yuem, 499-500 31st year, 501
1st moon, day Yih Sze, February 13th

In the Tables, 501 is in the next epoch, Chung Hing

151

A D 501 April 14

In the reign of Ho Te, the 1st year of the epoch Chung Hing, 31st moon, day Yih Sze, there was a comet in the horizon

Ho Te and epoch Chung Hing, A D 501 31st moon, day Yih Sze, April 14th

This and the preceding are possibly the same comet they are both from
'M T L'

LIANG DYNASTY, A D 502-556

152

A D 532 January 6 (?)

In the reign of Woo Te, the 5th year of the epoch Chung Ta Tung, 1st moon, day Ko Yew, a tailed star was seen

Emperor Woo Te, A D 502-549, epoch Chung Ta Tung, 528-534 5th year,
532, 1st moon, day Ke Yew, January 16th This date is doubtful

153

A D 539 November 17

In the 5th year of the epoch Ta Tung, 10th moon, day Sin Chow, a comet appeared in Nan Tow. It was about one cubit in length, pointing to the south east. It gradually increased to about 10 cubits in length. In the 11th moon, day Yih Maou, it entered S D Lew and disappeared.

Epoch Ta Tung, 535-545, 5th year, 539 10th moon, day Sin Chow, November 17th, 11th moon, day Yih Maou, December 1st

S D Nan Tow, or Tow, determined by ζ , τ , σ , &c Sagittarii

S D Lew determined by α , β , γ Arietis

She Ke, M T L

CHIN DYNASTY, A D 557-588

154

A D 560 October 4

In the reign of Wan Te, the 1st year of the epoch Teon Kee, the 9th moon, on the day Kwei Chow, a comet was seen. It was 4 cubits in length. The tail pointed to the south west.

Emperor Wan Te, A D 560-566, epoch Teon Kee, 560-565, 1st year, 560 9th moon, day Kwei Chow, October 4th

She Ke, M T L

155

A D 565 July 23

In the 6th year of the same epoch, the 6th moon, day Sin Yow, there was a comet about 10 cubits in length. It was seen in Shang Tao.

Teon Kee, 6th year, A D 565 6th moon, day Sin Yow, July 23rd

Shang Tao, 4 λ Ursa Majoris

She Ke, M T L

156

A D 568 August 3

In the reign of Fai Te, the 2nd year of the epoch Kwang Ta, the 6th moon, day Ting Hae, a comet was seen.

Emperor Fai Te, A D 567-568, epoch Kwang Ta, the same, 2nd year, 568 6th moon, day Ting Hae, August 3d

M T L

157

A D 575 April 27

In the reign of Souen Te, in the 7th year of the epoch Tu Kee, 4th moon, day Ping Seuh, there was a comet near Tu Kee.

Emperor Souen Te, A D 569-582, epoch Tu Kee the same, 7th year, 575 4th moon, day Ping Seuh, April 27th

Tu Kee, Arcturus

158

A D 416 January 26

In the 12th year of the same epoch, the 12th moon, day Sun Sze, a comet was seen in the south west

Tu Koen, 12th year, 580 12th moon, day Sun Sze, January 26th

She Ke, M T L

How Wei, A MINOR DYNASTY, A D 386-534

159

A D 416 June 27

In the reign of Ming Yuan Tsé, in the 1st year of the epoch Tae Chang, 5th moon, day Kao Shin, two comets were seen

Ming Yuan Tsé, A D 409-423, epoch Tae Chang, 416-423, 1st year, 416 5th moon, day Kao Shin, June 27th

M T L

Pin Tan, A MINOR DYNASTY, A D 570-577

160

A D 565 (?) April 21

In the reign of Woo Ching Te, the 4th year of the epoch Ho Tsung, 3rd moon, a comet was seen

Emperor Woo Ching Te, A D 561-564, epoch Ho Tsung, 562-564, 4th year, 565 (?) 3rd moon, April

She Ke, M T L

The 'She Ke' adds the day, Woo Tsoo, April 21

The Tables give but 3 years to this epoch the date is consequently doubtful

161

A D 565 July 24

In the reign of How Choo, the 1st year of the epoch Teon Tung, the 6th moon, day Jin Souh, a comet was seen in Wan Chang. Its length was reckoned at $\frac{1}{7}$ th of a cubit. It entered Wan Chang. It passed over Shang Tsoang, and afterwards crossed Tze Wei Kung to its western boundary. It gradually lengthened to about 10 cubits. It pointed to S D Shih and Peih. After about 100 days it entered S D Hou and Wu, and then disappeared.

Emperor How Choo, A D 565-576, epoch Teon Tung, 565-569, 1st year, 565 6th moon, day Jin Souh, July 24th

S D Wei determined by α Aquarii and θ , ϵ Pegasi

Shih determined by α Pegasi and others near

Peih determined by γ Pegasi and α Andromedae

Hou determined by β Aquarii and others

Wan Chang, θ , ν , ϕ , &c Ursa Majoris

Shang Tsoang, stars in Coma Berenices

Tze Wei Kung, cycle of perpetual apparition

She Ke, M T L

162

A D 568 July

In the 4th year of the same epoch, the 6th moon, a comet was seen in S D Tung

Teen Tung, 4th year, A D 568 6th moon, July

S D Tung, γ , ζ , λ , μ , &c Geminorum

She Ke, M T L

163

A D 568 August

In the 7th moon of the same year a comet was seen in S D Fang and Sin. It was white like meal, or the refuse of silk, and was as large as a tow measure. It went to the east. In the 8th moon it entered Toon Sho. It gradually increased in length to 40 cubits. In shape it resembled a malon. It passed through S D Hsu and Wei. It entered S D Shih. It passed over the Lo Kung. In the 9th moon it entered S D Kwei. It passed on to S D Low, and then disappeared.

Teen Tung, 4th year 7th moon, 568, August, 8th moon, September, 9th moon, October

S D Fang determined by β , δ , π , ρ in ScorpioSin determined by α , σ , τ in ScorpioHsu determined by β Альгид и anotherWei determined by α Альгид и θ , ϵ РеддигиShih determined by α , β Рогури и others nearKwei determined by β , δ , ϵ Антиноиди и блеск в ПисцеLow determined by α , β , γ Альгитас, &c

Teen She, space bounded by Scorpions

Lo Kung, three groups of two stars each in Pegasus they are λ , μ , η , ν , τ , and form part of S D Shih

She Ke, M T L

How Chou, A MINOR DYNASTY, A D 557 581

164

A D 561 September 26

In the reign of Woo Te, the 1st year of the epoch Paou Ting, the 9th moon, day Yih Sto, an extraordinary star was seen in S D Yih

Emperor Woo Te, 561-578, epoch Paou Ting, 561-565, 1st year, 561 9th moon, day Yih Sto, September 26th

S D Yih determined by α and others in Crater

She Ke

165

A D 565. July 22

In the 5th year of the same epoch, the 6th moon, day Kang Shun, a comet appeared in Sen Tse. It entered Wan Chang and Shang Tsieang. It afterwards crossed the western boundary of Tere Kung. It entered S D Wei, and gradually increased to about 10 cubits in length. It pointed towards S D, Shih and Peih. After about 100 days it gradually diminished to about 2½ cubits in length. It arrived at S D Hsu and Wei, and then disappeared.

Paou Ting, 5th year, A.D. 565 6th moon, day Kang Shin, July 22

S D Wei determined by α Aquarii and θ, ε Pegasi

Shih determined by α, β Pegasi and stars near

Poh determined by α Tauri and others near

Hou determined by β Pegasi and another

San Tao, feet of Ursa Major

Wan Chang, θ, ν, φ, &c Ursa Majoris

Shang Tsang, ν, &c in Coma Berenices

Tse Kung, circle of perpetual apparition

M T L

This appears to be the same as No. 161 by a different observer, and on another day

166

A.D. 568 July 21

In the 31st year of the epoch Toon Ho, 6th moon, day Kee Seuh, a comet was seen in the eastern part of S D Tang. It was 10 cubits in length. Its colour was white in the upper part and reddish below. It ended in a point. It gradually went to the east. In the 7th moon, day Kwei Maou, it passed to the north of S D Kwei. It was then $\frac{4}{5}$ ths of a cubit in length. It afterwards disappeared.

Epoch Toon Ho, A.D. 566-571, 31st year, 568 6th moon, day Kee Seuh, July 21st, 7th moon, day Kwei Maou, August 19th

S D Tsing determined by γ, δ, λ, μ, &c Commissarii

S D Kwei determined by γ, δ, η, θ Uanou

She Ke, M T L

167

A.D. 574 April 4

In the 31st year of the epoch Koen Tih, the 2nd moon, day Woo Woo, a strange star, resembling a large patch, of a bluish-white colour, appeared in Woo Ohny, to the south-east. It was 3 cubits in length. It went slowly to the east, and whilst there increased to 2 cubits in length. In the 4th moon, day Jin Shin, it entered Wan Chang. On the day Ting Wei it entered Kwei in Pih Tow, to about the middle. It afterwards left Kwei, and gradually became smaller. It was visible altogether for 93 days.

She Ke

Epoch Koen Tih, A.D. 572-577, 31st year, 574 2nd moon, day Woo Woo, April 4th, 4th moon, day Jin Shin, May 8th, Ting Wei, May 23rd

Kwei in Pih Tow, the middle of the square in Ursa Major

Wan Chang, θ, ν, φ Ursa Majoris

168

A.D. 574 May 31

In the same year, the 4th moon, day Yih Maou, there was a comet just without the boundary of Tse Kung. It was large, like a man's fist colour, reddish white. It pointed to Woo To Tso. It went slowly to the south-east. Its length was 15 cubits. In the 5th moon, day Kee Tse, it went to the north of Shang Tao and disappeared.

L

Comets observed in China

Keon Thih, 3rd year, 574 4th moon, day Yih Maou, May 31st, 5th moon,
day Kee Two, June 9th
Tae Kung, circle of perpetual apparition
Woo To Two, β Leonis and small stars near
Shang Tae, ι , κ Ursa Majoris M T L
In the 'She Ko' thus is placed in the 10th moon

SUY DYNASTY, A.D. 589-617

169

A.D. 588 November 22

In the reign of the Emperor Wan Te, the 8th year of the epoch Kao Hwang, the 10th moon, day Kee Two, there was a comet in Koen Nou

Wan Te, one of the minor Princes, assumed the Imperial title, and thus became the founder of the Suy dynasty, A.D. 589, which was the 9th year of his epoch Kao Hwang, 581-600 consequently the 8th year will be 588 This reign closed in 604

10th moon, day Kee Two, November 22nd

Koen Nou, same as S D Nou, determined by α , β , &c Geminorum

She Ku, M T L

170

A.D. 594 November 10

In the 14th year of the same epoch, the 11th moon, day Kwei Wei, there was a comet in S D Hou and Wei It extended to S D Kwei and Lew

Kao Hwang, 14th year, 594 11th moon, day Kwei Wei, November 10th

S D Hou determined by β Aquarii and another

Wei determined by α Aquarii and θ , ι Piscium

Kwei determined by β , δ , ι , &c Andromedae and stars in Pisces

Lew determined by α , β , γ Arietis She Ku, M T L

171

A.D. 607 March 13

In the reign of Yang Te, the 3rd year of the epoch Tu Nuc, 2nd moon, day Ke Chow, a comet was seen in the eastern part of H D Tsing and Wan Chang It passed through Ta Ling, Woo Chay, and Pih Ho It entered Tso Wei and swept To Two It passed on, and after about 100 days it disappeared

Emperor Yang Te and epoch Tu Nuc, A.D. 605-616, 3rd year, 607 2nd moon, day Ke Chow, March 13th

S D Tsing determined by γ , ϵ , λ , μ Geminorum

Wan Chang, θ , ν , ϕ , &c Ursa Majoris Tz Teng, τ and others in Pisces

Woo Chay, α , β , θ , χ Aries and β Tauri Pih Ho, α , β , &c Geminorum

Tso Wei, space between stars in Leo and Virgo

To Two, β Leonis and stars now M T L

172

A D 607 April 4

In the 9th moon of the same year, day Sin Hoo, a tailed star was seen in the horizon to the west. It passed through S D Kwei, Lew, Kee, and Kang, and then was no longer seen. In the 9th moon, on the day Sin Wei, it returned, and was seen in the south. It was of a reddish color, and was in the horizon in S D Kee and Kang, near their boundaries. It swept Tao Wei near To Tso. It entered most of the S D, but did not extend to Tsen and Tsung. In the beginning of the next year it disappeared.

Ta Nao, 31st year, A D 607 31st moon, day Sin Hoo, April 4th, 9th moon, day Sin Wei, October 21st

S D Kwei determined by α , β , ι , &c Andromeda and stars in Pisces

Lew determined by α , β , γ Aries

Kee determined by α and ζ Virginis

Kang determined by ι , κ , λ , μ Virginis

Tsen determined by α , β , &c Ophiuchus

Tsung determined by γ , ι , μ , &c Geminiorum

Tao Wei, space between stars in Loo and Virgo

To Tso, β Leonis and other stars near

She Ke, M T L

This may relate to two comets, as the account is not very clear.

173

A D 615 July

In the 11th year of the same epoch, the 6th moon, there was a comet in Wan Chang, to the south east. Its length was from 5 to 6 tenths of a cubit. Its color was dusky, and its extremity pointed. In the evening it had a waving motion. It went to the north-west. For several days it was in Wan Chang. It went within 4 or 5 tenths of a cubit of Kung, but did not enter that space, and disappeared.

Ta Nao, 11th year, 615 6th moon, July

Wan Chang, θ , ϕ , ν Ursa Majoris

Kung, or Tse Kung, circle of perpetual apparition

M T L

174

A D 616 July

In the 13th year of the same epoch, the 6th moon, there was a comet in Tao Wei, near Woo To Tso. Its color was a yellowish red. It was from 3 to 4 cubits in length. After several days it disappeared.

Ta Nao, 13th year, A D 616 6th moon, July

Tao Wei, space between stars in Loo and Virgo

Woo Te Tso, β Leonis and small stars near

M T L

175

A D 616 October

In the 9th moon of the same year a comet was seen in Yung Shih

616 9th moon, October

Yung Shih, same as S D Shih, determined by α Pegasi and other stars near

M T L

TANG DYNASTY, A.D. 618-906

176

A.D. 626 March 26

In the reign of Khou Tsoo, the 9th year of the epoch Woo Tih, the 2nd moon, day Jin Woo, there was a comet in the S D Wei and Maou. On the day Ting Hoo the comet was in Keuen Sho.

Emperor Khou Tsoo, A.D. 618-626, epoch Woo Tih the same 9th year, 626 2nd moon, day Jin Woo, March 26th, Ting Hoo, March 31st

S D Wei determined by the three stars in Musa

S D Maou, determined by the Pleiades

Keuen Sho, v Paser

She Ke, M T L

177

A.D. 634 September 22

In the reign of Tao Tsung, the 8th year of the epoch Ching Kwan, the 8th moon, day Kee Tse, there was a comet in S D Hoo and Wei. It passed through Houen Hsien. On the day Yih Hoo it was no longer visible.

Emperor Tao Tsung and epoch Ching Kwan, A.D. 627-649, 8th year, 634 8th moon, day Kee Tse, September 22nd, Yih Hoo, October 31st

S D Hoo determined by β Aquarii and another

S D Wei determined by α Aquarii and θ, ε Pegasi

Houen Hsien, one of the 12 kung, answering to our sign Aquarius, and comprising S D Hoo, Hou, and Wei

M T L

178

A.D. 639

In the 13th year of the same epoch, the 3rd moon, day Yih Chow, there was a comet in S D Pash and Maou.

13th year of Ching Kwan, 639 3rd moon, day Yih Chow, April 30th

S D Pash determined by α, γ, δ, & ι Trianguli

S D Maou determined by the Pleiades

She Ke, M T L

The 'Sho Ko' makes the year 638

179

A.D. 641 August 1

In the 15th year of the same epoch, 6th moon, day Ke Yew, there was a comet in Tao Wei. It passed over Lang Wei. In the 7th moon, day Kee Shuh, it was no longer visible.

Ching Kwan, 15th year, A.D. 641 6th moon, day Ke Yew, August 1st, 7th moon, day Kee Shuh, August 26th

Tao Wei, space between stars in Loo and Vingo

Lang Wei, Coma Berenices

She Ke, M T L

180

A D 663 September 29

In the reign of Khou Tsung, the 31st year of the epoch Lung So, 8th moon, day Kwei Meou, there was a comet in Tso She Te. It was about 2 cubits in length. On the day Yih Sze it was no longer visible.

Emperor Kaou Tsung, A.D. 650-683, epoch Lung So, 661-663, 3rd year,
663 8th moon, day Kwei Maou, September 29th, day Yih Ssu, October 1st
Teo She Te, 5, o, π Bootis She Ke, M T L

181

A.D. 667 May 24

In the 2nd year of the epoch Koon Fung, 4th moon, day Png Shin, there was a comet in the north east. Its place was in Woo Chay, between S D Pei and Maou. On the day Yih Hoo it was no longer visible.

Epooi Koen Fung, 666-667 and year, 667 4th moon, day Ping Shin, May
24th, day Yih Lao, June 12th

S D Path determined by α , γ , δ , & ϵ Tauri

S D Mass determined by the Plaques

Woo Chay, a, θ , θ , κ Awings and β Taiwan

Shear Modulus

182

A.D. 676 January 3

In the 2nd year of the epoch Shang Yuan, the 12th moon, day Jin Woo, there was
a comet to the south of S D Koo and Kang. It was 5 cubits in length.

Epoch Shang Yuan, 674-675 2nd year, 675 12th moon, day Jin Woo, 676,
January 31st

H D Koo determined by α and ζ Virginis

H D Kang determined by ζ , ν , λ , θ Vignettes

Sho *Ka*, *M T L*

183

A.D. 676 July 7

In the 3rd year of the same epoch, the 7th moon, day Ting Hae, there was a comet in the eastern part of S D Tsang, pointing towards Ph Ho. It was about 3 cubits in length. Its luminous envelope increased greatly until it became 30 cubits in length. It pointed towards Chung Tso and Wan Chang. In the 9th moon, day Yih Yew, it disappeared.

It pooh Shang Yuan, 3rd year, 676 7th moon, day Ting Hae, July 7th, 9th
moon, day Yih Yow. September 3rd

S. D. Tung determined by δ , λ , μ &c Gemmation.

Рік Під. а. б. в. г. Години

Справа: $\lambda = 4 \mu\text{мкм}$

Одног раз, я, μ стоял у окна
Увидел Страну, где жил План Марии.

She Ke, M.T.L.

The 'Sho Ko' has 'swept Chung Tae and Wan Chang,' which appears to be the preferable reading.

184

A D 681 October 17

In the 1st year of the epoch Kne Thih, the 9th moon, day Ping Shin, there was a comet in the middle of Teem She. It was 50 cubits in length. It gradually lessened and went to the east. It passed on to Ho Koo. On the day Kwei Chow it was no longer visible.

Epoch Kne Thih, 1st year, A D 681 9th moon, day Ping Shin, October 17th
day Kwei Chow, November 3rd

Teem She, space bounded by Scorpions

Ho Koo, α, β, γ Aquilæ

She Ke, M T L

185

A D 683 April 20

In the 2nd year of the epoch Yung Shun, the 3rd moon, day Ping Woo, there was a comet to the north of Woo Chay. In the 4th moon, day Sin Wei, it disappeared.

Epoch Yung Shun, A D 682-683 2nd year, 683 3rd moon, day Ping Woo,
April 20th, day Sin Wei, May 15th

Woo Chay, α, β, &c. Aquila and β Tauari

She Ke, M T L

186

A D 684 July 8

In the epoch Wan Ming, 1st year, 7th moon, day Sin Wei, there was a comet in the west. It was about 10 cubits in length. In the 8th moon, day Ken Shin, it disappeared.

The epoch Wan Ming does not occur as one of those of this dynasty. In the 'Tung Keen Kang Muh,' vol iv, it is mentioned as that of one of the princes who assumed sovereignty about this time, and the 1st year coincides with the 1st year of the Emperor Chung Tsung; hence it is A D 684.

7th moon, day Sin Wei, July 8th, 8th moon, day Ken Shin, August 10th

She Ke, M T L

Biot makes this September 6th and October 9th, by computation it comes out as I have ordered it.

187

A D 684 September 12

In the reign of Chung Tsung, the 1st year of the epoch Kwang Thih, the 9th moon, day Ting Chow, there was a star resembling a half moon in the west.

Emperor Chung Tsung, A D 684-709. The epoch Kwang Thih is not in the regular list. In 'M T L' it is the 1st epoch of Chung Tsung, and thus is, there fore, his 1st year, 684 9th moon, day Ting Chow, September 12th. Biot makes it October 11th.

This was most likely a meteor.

188

A D 707 November 16

In the 1st year of the epoch King Lung, the 10th moon, day Jim Woo, there was a comet in the west. In the 11th moon, day Koa Yim, it disappeared.

King Lung, A D 707-709 1st year, A D 707 10th moon, day Jim Woo, November 16th, 11th moon, day Koa Yim, December 17th She Ke, M T L

189

A D 708 March 30

In the 2nd year of the same epoch, 2nd moon, day Ting Yow, there was a comet between S D Wei and Maou.

King Lung, 2nd year, 708 2nd moon, day Ting Yow, March 30th

S D Wei determined by three stars in Musca

S D Maou determined by the Pleiades

She Ke, M T L

190

A D 708 September 21

In the 8th moon of the same year, day Jim Shin, there was a comet in Tse Kung

8th moon, day Jim Shin, September 21st

Tse Kung, circle of perpetual apparition

191

Between A D 710 and A D 713

In the 1st year of the epoch Yen Ho, the 6th moon, there was a comet. From Hien Yuon it entered Tse Wai. It passed on to Tu Koo and disappeared.

The epoch Yen Ho is not one of the regular epochs of this dynasty. It appears to have been somewhere between 710 and 713.

Hien Yuon, Regulus and other stars in Leo and Leo Minor

Tse Wai, space between stars in Leo and Virgo

Tu Koo, Arcturus

192

A D 730 June 30

In the reign of Yuen Tsung, the 18th year of the epoch Kao Yuen, the 6th moon, day Koa Tse, there was a comet in Woo Chay. On the day Kwoi Yow the comet was in S D Peih and Maou.

Emperor Yuen Tsung, called also Hienen Tsung, A D 713-755, epoch Kao Yuen, 713-741 18th year, 730 6th moon, day Koa Tse, June 30th, day Kwoi Yow, July 9th

S D Peih determined by α , γ , δ , ϵ Triuli

S D Maou determined by the Pleiades

Woo Chay, α , β , γ Aurigae and β Tau

The latter portion of this, from Kwoi Yow, is separate in the original, both in the 'She Ke' and 'M. T L'. It is, however, evident that both relate to the same comet.

193

A D 739

In the 26th year of the same epoch, the 3rd moon, day Ping Tare, there was a comet in Texo Kung. It was bright. It passed through Pih Tow Kwei. After 10 days, being obscured by clouds, it was no more seen.

Kao Yuen, 26th year, 739

Pih Tow Kwei, the square in Ursa Major

She Ke, M T L

194

A D 760 May 16

In the reign of Suh Tsung, the 3rd year of the epoch Koen Yuen, the 4th moon, day Ting S/o, there was a comet in the east. Its place was between S D Lew and Wei. Its colour was white. It was 4 cubits in length. It went rapidly to the east. It passed through S D Macu, Peh, Tsuy Illo, Tsan, and Tung Tsan, to Kwei, Lew, and Moon Yuen. It passed to the west of Yow Chih Fa. It was seen altogether for about 50 days.

Emporor Suh Tsung, A D 756-762, epoch Koen Yuen, 758-759 3rd year, day Ting S/o, 760, May 16th.

The Tables give but two years to the epoch Koen Yuen.

S D Lew determined by α , β , γ Arietis

Wei determined by the three stars in Musca

Macou determined by the Pleiades

Peh determined by α , γ , δ , ϵ , & TauriTsuy Illo, or Tsuy, determined by λ and stars in head of OrionTsan determined by α , β , γ , δ OiononisKwei determined by γ , δ , ϵ , θ CancriLew determined by δ , &c HydriTsung determined by γ , ϵ , λ , μ GeminorumMoon Yuen, α Leonis and others in Leo and Leo MinorYow Chih Fa, β Vulpeculae

She Ke, M T L

195

A D 760 May 15

In the intercalary moon of the same year, on the day Sin Yow, the 1st day of the moon, a comet was seen in the west. It was 10 cubits in length. When the 5th moon commenced it had disappeared.

The intercalary moon appears to have been that which preceded the 5th moon. The day Sin Yow will, therefore, be May 15, and the 5th moon June or July.

She Ke, M T L

196

A D 767 January 12

In the reign of Tao Tsung, the 1st year of the epoch Tu Luh, the 12th moon, day Ke Ilao, there was a comet in Kwa Ohnou. It was about a cubit in length. After 20 days it disappeared. It passed over Hwan Chay.

Emperor Tae Tsung, A.D. 763-769, epoch Ta Leih, 766-779 1st year, 766
12th moon, day Ko Hsiao, January 12, 767

Kwa Chaou, α , β , γ , &c. Delphini

Hwan Chay, ϵ , ι , &c Ophiuchi

She Ke, M T L

197

A.D. 770 June 15

In the 5th year of the same epoch, the 4th moon, day Ke Wei, there was a comet in Woo Chay. Its luminous envelope appeared much disordered. It was about 30 cubits in length. In the 5th moon, day Ke Maou, the comet was seen in the north. Its colour was white. On the day Kwei Wei it went to the east, and approached the middle star of Pa Kuh. In the 6th moon, day Kwei Maou, it came near San Kung. On the day Ko Wei it disappeared.

Epoch Ta Leih, 5th year, 770 5th moon, day Ke Maou, June 15th days, Kwei Wei, June 19th, Kwei Maou, July 9th, Ko Wei, July 25th

San Kung, three stars now head of Asterion

Pa Kuh, δ , ξ Aurigae

She Ke, M T L

197^{*}

A.D. 773 January 17

In the 7th year of the same epoch, the 12th moon, day Ping Yin, there was a tailed star in the lower part of S D Tsan. The tail of this comet extended across the heavens from the star Tang in S D Tsan.

7th year of epoch Ta Leih, 772 12th moon, day Ping Yin, 773, January 17
S D Tsan determined by α and other stars in Orion

Tang, a star in Orion not identified

She Ke, M T L

198

A.D. 815 April.

In the reign of Hien Tsung, the 10th year of the epoch Yuen Ho, there was a tailed star in Tae Wei. The tail extended to Hien Yuen.

Emperor Hien Tsung, A.D. 806-820, epoch Yuen Ho, the same, 10th year,
A.D. 815 3rd moon, April

Tae Wei, space between stars in Leo and Virgo

Hien Yuen, α , γ , ϵ , λ and others in Leo and Leo Minor

She Ke, M T L

199

A.D. 817 February 17.

In the 12th year of the same epoch, the 1st moon, day Woo Tze, there was a comet in S D Peih.

Yuen Ho, 12th year, 817 1st moon, day Woo Tze, February 17th

S D Peih determined by α and others in Taurus

She Ke, M T L

200

A D 821 February 27

In the reign of Mu Tsung, the 1st year of the epoch Chang King, 1st moon, day Ke Wei, there was a comet in S D Yih

Emperor Mu Tsung and epoch Chang King, 821-824, 1st year 1st moon, day Ke Wei, 821, February 27th

S D Yih determined by a and others in China

She Ke, M T L

201

A D 821 March 7

In the 2nd moon of the same year, day Ting Maou, there was a comet in Tao Wei, to the west of the star Shang Tseang. In the 6th moon the comet was in S D Maou. Its length was 10 cubits. It was visible altogether for 10 days, after which it disappeared

2nd moon, day Ting Maou, 821, March 7 6th moon, July

Tao Wei, space between stars in Leo and Virgo

Shang Tseang, σ Leonis

S D Maou determined by the Pianodes

She Ke, M T L

202

A D 828 July 5

In the 1st year of Wan Tsung, the 2nd year of epoch Tao Ho, the 7th moon, day Koa Shin, there was a comet in Yew She Te, to the south. Its length was 2 cubits

Emperor Wan Tsung, A D 827-840, epoch Tao Ho, 827-835 2nd year, 828 7th moon, day Koa Shin, July 5

Yew She Te, η, ν, τ in Bootes

She Ke, M T L

203

A D 829 December

In the 31st year of the same epoch, the 10th moon, a strange star was seen in Shway Wei

Tao Ho, 31st year, 829 10th moon, November

Shway Wei, ζ, θ, α Canis Minoris

She Ke

204

A D 834 October 9

In the 8th year of the same epoch, the 9th moon, day Sin Hae, there was a comet in Tao Wei. It was about 10 cubits in length. Its course was to the north-west. It passed over Lang Wei. On the day Kang Shin it was no longer visible

Tao Ho, 8th year, 834 9th moon, day Sin Hae, October 9th, Kang Shin, October 18th

Tao Wei, space between stars in Leo and Virgo

Lang Wei, Coma Berenices

She Ke, M T L

205

A D 837 March 22

In the 2nd year of the epoch Kao Chung, the 2nd moon, day Ping Woo, there was a comet in S D Wei. It was about 7 cubits in length. It pointed towards Nan Tow. On the day Woo Shin it was to the south west of S D Wei. It was bright, and moved rapidly. On the day Kwei Chow its place was in S D Hsu. On the day Sin Yew its length was about 10 cubits. It went to the west, gradually pointing to the south. On the day Jin Souh its place was in Woo Neu, its length was about 20 cubits, and was 3 cubits in breadth. On the day Kwei Hsu the tail was still broad. In the 3rd moon, day Kee Tsoe, its place was in Nan Tow. On the day Yih Chow its length was 50 cubits, the end (of the tail) being divided into two branches, the one pointing to D To, the other covering S D Fang. On the day Ping Yin its length was 6 cubits, and was no longer branched. It pointed to the north. Its place was in the 7th degree of S D Kang. On the day Ting Maou it went to the north-west, pointing to the east. On the day Ke She its length was about 80 cubits. Its place was then in S D Chang. On the day Kwei Wei it was but 3 cubits in length. Its place was to the right of Moon Yuen. After this it was no longer visible.

Epoch Kao Chung, A D 836-840 and year, 837 and moon, day Ping Woo, March 22 days, Woo Shin, March 24, Kwei Chow, March 29, Sin Yew, April 6, Jin Souh, April 7, Kwei Hsu, April 8 3rd moon, day Kee Tsoe, April 9, Yih Chow, April 10, Ping Yin, April 11, Ting Maou, April 12, Ke She, April 14, Kwei Wei, April 28

S D Wei determined by α Aquarii and θ , ϵ Pegasi

Hou determined by β Aquarii and another

To determined by α , β , γ , ι Librae

Fang determined by β , δ , π in Scoprio

Kang determined by ι , κ , λ , θ Virginis

Chang determined by κ , λ , μ , & ζ Hydrius

Tow, or Nan Tow, determined by δ , μ , & σ Sagittarii

Woo Neu, or Neu, determined by ι , μ , ν , & ϵ Aquarii

Moon Yuen, α and others in Leo and Leo Minor

'M T L' adds, in a kind of note, a sentence implying that, generally speaking, it may be looked upon as a constant rule, that when a comet appears in the morning its direction is to the west, and to the east when it appears in the evening.

206

A D 837 April 29

In the same moon, day Kee Shin, a strange star was seen in the lower part of S D Taing, to the east.

Day Kee Shin, 837, April 29th

S D Tung determined by γ , ι , λ , μ , & ζ Geminorum

She Li

207

A D 837 May 3

On the day Woo Tze a strange star was seen within Twan Mun, near the star Ping

Day Woo Tze, May 3rd

Twan Mun, between β and γ VirginisStar Png, ν and others in Virgo

She Ke

208

A D 837 May 21

In the 4th moon of the same year, day Ping Woo, the strange star seen in the lower part of S D Taung, to the east, disappeared

837 4th moon, day Ping Woo, May 21st

S D Taung, as above This relates to No 206

She Ke

209

A D 837 June 17

In the 5th moon, day Kwei Yow, the strange star seen in Twan Mun disappeared

5th moon, day Kwei Yow, June 17th

Twan Mun See No 207, to which this relates

She Ke

210

A D 837 June 26

In the same moon, day Jin Woo, a strange star, like a comet, was seen in Nan Tow, near Teem Yo

Day Jin Woo, June 26th

Nan Tow, same as S D Tow, determined by δ , μ , &c Sagittarii

Teem Yo, not identified

She Ke

211

A D 837 September 9

In the 8th moon of the same year, day Ting Yow, there was a comet in the S D Heu and Wei

837 8th moon, day Ting Yow, September 9th

S D Heu determined by β Aquarii and anotherS D Wei determined by α Aquarii and θ , ϵ Pegasus

She Ke, M T L

212

A D 838 November 11

In the 3d year of the same epoch, the 10th moon, day Yih Sze, there was a comet in S D Chin and Kwei It was about 20 cubits in length The tail gradually pointed to the west

Kee Chang, 3d year, 838 10th moon, day Yih Sze, November 11th

S D Chin determined by β , &c CorviS D Kwei determined by γ , δ , &c Cancri

She Ke, M T L

213

A D 838 November 21

In the 11th moon, day Yih Maou, there was a comet in the east. Its place was in S D Wei and Ko, from east to west. It extended across the heavens. In the 12th moon, day Jin Shin, it was no longer seen.

11th moon, day Yih Maou, November 21, Jin Shin, December 8

S D Wei determined by ϵ , μ , ν , &c in Socorro

S D Ko determined by γ , δ , ϵ , & ζ Sagittarii. $S_{\text{M}, K_0, M, T, L}$

This may possibly be a continuation of the preceding account.

214

A D 839 Feb, 1911 7

In the 4th year, 1st moon, day Kwan Yew, there was a comet in Wu Lin.

Kao Chung, 4th year, 830 1st moon, day Kwei Yew, February 27th

Yu Lin, & c. v and others in Australia. See also U. T. L.

215

AD 840 March 12

In the intercalary moon of the same year, day Ping Woo, there was a comet in Kwon Oho to the north-west. In the 2nd moon, day Ke Naen, it disappeared.

The intercalary moon appears to have been that immediately preceding the 2nd moon. Hence the day Ping Woo will be March 12, and the 2nd moon, Ke Mao, April 14.

Kouon Cho, C. Y and others in Parasus She Ke, M. T. L.

216

A D 840 March 20

In the 5th year of the same epoch, 2nd moon, day Kang Shin, there was a comet in Ying Shih, to the east, between that and S D Pei. On the 20th day it disappeared.

Epoch Kao Ching, 5th year, 840 2nd moon, day Kang Shin, March 20

Ying Shih, same as S D Shih, determined by a Pegau and others

S D Peak, determined by γ Pagan, &c Shs Ks, M T L

217

A D 840 December 3

In the 11th moon of the same year, day Woo Shin, there was a comet in the east

840 11th moon, day Woo Shin, December 31st *She Ke, M T L*

218

A.D. 841 July

In the reign of Woo Tsung, the 1st year of the epoch Hwuy Chang, the 7th moon, there was a comet in Yu Lin, between Ying Shih and the east of the S D Peh.

Emperor Woo Tsung and epoch Hwuy Chang, A.D. 841-846 1st year, 841
7th moon, July

S D Shih determined by a Pegan and others

Ying Shih, same as a Pegan

S D Peh determined by γ Pegan and a Andromedae

Yu Lan, δ , τ and others in Aquarius

She Ke, M T L

219

A D 841 December 22

In the 11th moon of the same year, day Jin Yin, there was a comet near Pih Lo Sze Mun. Its place was in Ying Shih. It entered Ts'e Kung. In the 12th moon, day Sun Maou, it was no longer visible.

841 11th moon, day Jin Yin, December 22, 12th moon, day Sun Maou, February 9, 842

S D Shih determined by a Pegan and others

Pih Lo Sze Mun, Tomalhaut

Ts'e Kung, circle of perpetual apparition

She Ke, M T L

This date is unsatisfactory, the day Sun Maou not falling in the 12th moon

220

A D 851 April

In the reign of Seuen Tsung, the 6th year of the epoch Ta Chung, the 31st moon, there was a comet in S D Tsuy and Tseen, near the star Tang.

Emperor Seuen Tsung and epoch Ta Chung, A D 846-859 6th year, 851, 3d moon, April

S D Tsuy determined by λ and small stars in head of Orion

S D Tseen determined by α , β , γ , δ Orionis.

Tang, unassociated star in Orion

She Ke, M T L

221

A D 856 September 27

In the 11th year of the same epoch, the 9th moon, day Yih Wei, there was a comet in S D Fang. It was 3 cubits in length.

Ta Chung, 11th year, 856 9th moon, day Yih Wei, September 27

S D Fang determined by β , δ , π , &c in Scorpio

She Ke, M T L

222

A D 864 June 21

In the reign of the Emperor E Te Tsung, the 5th year of the epoch Hien Tung, the 5th moon, day Ke Hsia, in the evening, a comet was seen in the north-east, through an opening in the clouds, for not more than 15 minutes. Its colour was yellowish white. It was 3 cubits in length, and was in S D Lew.

Emperor E Te Tsung and epoch Hien Tung, A D 860-873 5th year, 864, 5th moon, day Ke Hsia, June 21

S D Lew determined by α , β , γ Aries

She Ke, M T L

223

A D 868 February

In the 9th year of the same epoch, the 1st moon, there was a comet in S D Lew and Wei

Han Tung, 9th year, 868 1st moon, February

S D Lew determined by α , β , γ Arietis

S D Wei determined by the three stars in Musca

She Ke, M T L

224

A D 869 September

In the 10th year of the epoch Han Tung, 8th moon, there was a comet to the north east of Ta Lang

Han Tung, 10th year, 869 8th moon, September

Ta Lung, τ and others in Pegasus

She Ke, M T L

225

A D 877 June

In the reign of He Tsung, the 4th year of the epoch Koon Foo, the 5th moon, a comet was seen

Emperor He Tsung, A D 874-888, epoch Koon Foo, 874-879 4th year, 877

5th moon, June

She Ke, M T L

226

A D 885

In the 1st year of the epoch Kwang Ko a comet was seen in Tsooh Shwuy, between that and Tsooh Sun

Epoch Kwang Ko, 885-887 1st year, 885

Tsooh Shwuy, λ , μ Pisces

Tsooh Sun, χ Geminorum and μ Cancer

She Ke, M T L

227

A D 886 June 13

In the 2nd year of the same epoch, 5th moon, day Ping Souh, there was a comet in S D Wei and Ko. It passed through Pih Tow and She To

Kwang Ko, 2nd year, 886 5th moon, day Ping Souh, June 13

S D Wei determined by ϵ , μ , ν , & σ in Scorpio

S D Ko determined by γ , δ , ϵ Sagittarii

Pih Tow, α , β , γ , & δ Ursa Majoris

She To, stars in feet of Bootis

228

A D 891 May 12

In the 2nd year of Chaou Tsung, the 2nd year of the epoch Ta Shun, the 4th moon, day Kang Shin, there was a comet in San Tao. It went to the east. It entered Tao Wei. It swept Ta Koo and Teen She. It was about 100 cubits in length. In the 5th moon, day Koou Souh, it was no longer visible

Comets observed in China

- Emperor Chaou Tsung, A.D. 889-904, epoch Tu Shun, 890-891 and year,
 891 4th moon, day Kong Shin, May 12 5th moon, day Kee Seuh, July 5
 San Tao, foot of Ursa Major
 Tse Wu, space within stars in Leo and Virgo
 Teon She, space bounded by Scorpions
 Ta Kee, Aries

She Ke, M T L

229

A.D. 892 December

In the 1st year of the epoch King Fuh, the 11th moon, there was a comet in S D Tow and Now

Epoch King Fuh, A.D. 892-893 1st year, 892 11th moon, December

S D Tow determined by ζ, τ, σ, φ, &c in Sagittarius

S D New determined by α, β, &c Capricorni

She Ke, M T L

230

A.D. 893 May 6

In the 2nd year of the same epoch, the 3rd moon, the heavens were for a long time covered with clouds. In the 4th moon, on the day Yih Yew, the clouds gradually opened, and a comet was seen in the evening in Shang Tao. It was about 100 cubits in length. It went to the east. It entered Tao Wei and swept Ta Kee. It entered Teon She. After 37 days it increased in length to about 200 cubits (nr), when the weather becoming cloudy it could no longer be seen.

Epoch King Fuh, 2nd year, 893 3rd moon, April 4th moon, day Yih Yew, May 6th

Shang Tao, ι, κ Ursa Majoris Ta Kee, Aries

Tao Wei, space within stars in Leo and Virgo

Teon She, space bounded by Scorpions

She Ke, M T L

Pingüé has 895 for the year and June 25 for the day, the Tables give the year 893, &c as above

231

A.D. 894 February

In the 1st year of the epoch Keen Ning, the 1st moon, there was a comet in Shun Show

Epoch Keen Ning, A.D. 894-897 1st year, 1st moon, 894, February

Shun Show, one of the 12 kung, answering to our zodiacal sign Gemini or Cancer. It comprises the S D Tsung and Kwei, the stars composing which are in Gemini and Cancer

M T L

232

A.D. 905 May 22

In the 2nd year of the epoch Teon Yew, the 4th moon, day Kee Shin, there was a comet in Ho Pih, Kwan, and Wan Chang. It was about 30 cubits in length. It

entered Chung Tao and Hoo Tae. In the 5th moon, on the day Yih Chow, in the evening, it was in the left angle of Heen Yuon, extending towards the west of Teen She. In the morning the luminous envelope had an exceedingly angry appearance. It extended across the heavens. On the day Ping Yin it was cloudy, and when, on the day Sin Wei, it ceased a little from raining, the comet was no longer visible.

Epoch Toon Yew, A.D. 904-905 2nd year, 905 day Kee Shin, May 22 5th moon, day Yih Chow, June 12, Ping Yin, June 13, Sin Wei, June 18

Hoo Pih, or Pih Hoo, α , β , ρ , σ Geminorum

Kwan, Corona Borealis

Wan Chang, θ , ϕ , ν Ursa Majoris

Chung Tao, Hoo Tao, stars in the foot of Ursa Major

Heen Yuon, α and other stars in Leo and Leo Minor

Teen She, space bounded by Serpens

She Ke, M T L

Woo Tan, i.e. Five Small Dynasties, A.D. 907-960

Now, or Later Liang, A.D. 907-922

233

A.D. 912 May 13

In the reign of Tuo Tsao, the 2nd year of the epoch Keeen Hwa, the 4th moon, day Jin Shin, a comet appeared in S D Chang. On the day Kee Souh the comet was in Lang Tao.

Emperor Tuo Tsao, A.D. 907-912, epoch Keeen Hwa, 911-912 2nd year, 912 4th moon, day Jin Shin, May 13, day Kee Souh, May 15

S D Chang determined by κ , λ , μ , &c Hydrius

Lang Tao, χ Leonis and small stars near

She Ke, M T L

Now, or Later Tang, A.D. 923-935

234

A.D. 928 October 14

In the reign of Ming Tsung, the 3rd year of the epoch Toon Chung, the 10th moon, day Kang Woo, a comet appeared in the south-west. It was about 10 cubits in length. It pointed to the south east. Its place was in the 5th dogstar of S D Now. After three evenings it was no longer visible.

Emperor Ming Tsung and epoch Toon Chung, 926-929 3rd year, 928 10th moon, day Kang Woo, October 14

S D Now determined by α , β , &c Capricorni

She Ke, M T L

235

A D 936 October 28

In the reign of Fai Te, the 31st year of the epoch Tsching Tso, the 9th moon, day Ka Chow, a comet appeared in S D Hsu and Wei. It was about 1 cubit in length. It was very small. It passed the stars Tseen Luy and Kuh.

Emperor Fai Te, A D 934-935, epoch Tsching Tso, 31st year, 936 9th moon, day Yih Chow, October 28

S D Hsu determined by β Aquarii and another

S D Wei determined by α Aquarii and θ , ϵ Pegasus

Tseen Luy, ξ Aquarii, λ Capricorni, and others

Kuh, μ Capricorni

She Ke, M T L

'M T L' has Mo Te for Fai Te

How Tsin, A D 936-946

236

A D 941 September 18

In the reign of Kaou Tsoo, the 6th year of the epoch Tseen Fu, the 9th moon, day Jin Tze, a comet appeared in the west. It swept Tseen She Yuan. It was about 10 cubits in length.

Emperor Kaou Tsoo and epoch Tseen Fu, 936-944, 6th year, 941 9th moon, day Jin Tze, September 18

Tseen She Yuan, space bounded by Serpens

M T L

237

A D 943 November 5

In the 8th year of the same epoch, 10th moon, day Kang Souh, in the evening, a comet was seen in the east. It pointed to the west. The tail was 10 cubits in length. Its place was in the 9th degree of S D Kee.

Tseen Fu, 8th year, 943 10th moon, day Kang Souh, November 5

S D Kee determined by α and ζ Virginis She Ke, M T L

'M T L' has 1 cubit in length

How Chow, A D 951-960

238

A D 956 March 13

In the reign of She Tsung, the 31st year of the epoch Ilcen Tih, the 1st moon, day Jin Seuh, in the evening, there was a comet in S D Tseen. The tail pointed to the south east.

She Tsung, A D 954-959, epoch Ilcen Tih the same 31st year, 956 1st moon, day Jin Seuh, March 13

S D Tseen determined by α , β , γ , etc. Orionis

She Ke, M T L

THE LATER SUNG DYNASTY, A.D. 960-1279

239

A.D. 975 April

In the reign of Tao Tsoo, the 8th year of the epoch Kao Paou, the 3rd moon, a comet was seen in the east

Emperor Tao Tsoo, 960-975, epoch Kao Paou, 968-975 8th year, 975 3rd moon, April

240

A.D. 975 August 3

In the 6th moon of the same year, day Kea Tsoe, a comet appeared in S D Low. It was 40 cubits in length. In the morning it was seen in the east. It pointed to the south-west. It passed over Yu Kwei. It went on to the eastern part of S D Pauh. Altogether it passed through 11 S D in 83 days, and then disappeared.

Kao Yuon, 8th year, 975 6th moon, day Ken Tsoe, August 3

S D Low determined by δ , ϵ , ζ , θ Hydræ

S D Pauh determined by α Andromedæ and γ Pegasi

Yu Kwei, same as S D Kwei, determined by γ , δ , η , θ Cancer

M T L

241

A.D. 989 August 13

In the reign of Tao Tsung, the 2nd year of the epoch Tuan Kung, 6th moon, day Woo Tsoe, there was a comet in the eastern part of S D Tung, to the west of Tsoh Shuwæ. Its colour was a bluish white. Its luminous envelope gradually increased in length. In the morning it was seen for 10 days in the north-east, and to the north-west in the evening. It passed over Yow Shø To. It was visible altogether for 30 days, after which it disappeared.

Emperor Tao Tsung, A.D. 976-997, epoch Tuan Kung, 988-989 2nd year, 989 1st moon, day Woo Tsoe, August 13

S D Tung determined by γ , ϵ , λ , μ , &c Commissum

S D Kang determined by ι , κ , λ , ϕ Virginis

Yow Shø To, η , τ , ν Bootis

Tsoh Shuwæ, λ , μ Piscæ

M T L

242

A.D. 998 February 23

In the reign of Chung Tsung, the 1st year of the epoch Nan Ping, the 1st moon, day Kao Shin, there was a comet to the north of Ying Shih. Its luminous envelope was about 1 cubit in length. It passed on until the day Ting Yow, when it disappeared. It was altogether seen for 14 days.

Emperor Chung Tsung, A.D. 998-1022, epoch Nan Ping, 998-1003 1st year, 998 1st moon, day Kao Shin, February 23, day Ting Yow, March 8

Ying Shih, same as S D Shih, determined by α , β Pegasi, &c M T L

243

A D 1003 December 23

In the 6th year of the same epoch, the 11th moon, day Koa Yin, there was a comet in S D Tung and Kwei. It was like a large cup. Its colour was a bluish white. Its luminous envelope was about 4 cubits in length. It entered Woo Choo Shih. It passed over Woo Chay and entered S D Tuan. It was visible altogether for about 30 days, after which it disappeared.

Epoch Hien Ping, 6th year, 1003 11th moon, day Koa Yin, December 23

S D Tung determined by γ , ϵ , λ , μ , &c Geminorum

Kwei determined by γ , δ , η , 0 Cancer

Tuan determined by α , β , γ , δ , &c Orionis

Woo Choo Shih, 0, ν , τ , &c Geminorum Woo Chay, α , β , &c Aurigae, &c

M T L

244

A D 1018 August 4

In the 2nd year of the epoch Teon Hoo, the 6th moon, day Sun Hoo, a comet appeared in Pih Tow Kwei, to the north-east of the 2nd star. It was more than 3 cubits in length. It went to the north of the 1st star in Pih Tow. It passed near Teon Laou and over Wan Chang. Its length was then about 30 cubits. It passed through Teo Wei, San Tho, and Hoon Yuen. Its course was to the west until it arrived at Tsouh Sing. It was visible altogether for 37 days, and then disappeared.

Epoch Teon Hoo, A D 1017-1021 2nd year, 1018 6th moon, day Sun Hoo
August 4th

Pih Tow Kwei, the square in Ursa Major.

Teon Laou, ω , &c Ursa Majoris Wan Chang, 0, ν , ϕ , &c Ursa Majoris

San Tho, the stars in the foot of Ursa Major

Hoon Yuen, Regulus and other stars in Leo and Leo Minor

Tsouh Sing, the seven stars in S D Sing, determined by α , σ , τ , &c Hydrius

M T L

245

A D 1035 September 15

In the reign of Jin Tsung, the 2nd year of the epoch King Yow, the 8th moon, day Jin Souh, in the evening, there was a comet in S D Chang and Yih. It was 7 cubits in length and $\frac{4}{5}$ ths of a cubit in breadth. After 12 days it disappeared.

Emperor Jin Tsung, A D 1023-1063, epoch King Yow, 1034-1037 2nd year, 1035 day Jin Souh, September 15

S D Chang determined by κ , λ , μ , &c Ursa Majoris

S D Yih determined by α , &c Craterus

M T L

246

A D 1036 January 15

In the 12th month of the same year, day Ko Wei, in the evening, a comet appeared in Wao Ping. It had a luminous envelope.

12th moon, day Ko Wei, 1036, January 15th

Wao Ping, α , β , γ and others in the band of Pisces

M T L

247

A D 1049 March 10

In the 1st year of the epoch Hwang You, the 2nd moon, day Ting Maou, a comet appeared in S D Heu. In the morning it was seen in the east. It pointed to the south-west. It passed through Tso Wei and arrived at the S D Lew. It was visible for 114 days, and then disappeared.

Epoch Hwang You, A D 1049-1053 1st year, 1049 2nd moon, day Ting Maou, March 10

S D Heu determined by β Aquarii and another

S D Lew determined by α , β , γ Arietis

Tso Wei, circle of perpetual apparition

M T L

248

A D 1056 August

In the 1st year of the epoch Koa Yew, the 7th moon, a comet appeared in Tso Wei. It passed through Taoh Sing. Its colour was white. It was about 10 cubits in length. It passed on until the 8th moon, day Kwei Hoo, when it disappeared.

Epoch Koa Yew, A D 1056-1063 1st year, 1056 7th moon, August

Tso Wei, circle of perpetual apparition

Taoh Sing, the seven stars. Those appear to be the seven bright stars in Ursa Major

249

A D 1066 April 2

In the reign of Ying Tsung, the 3rd year of the epoch Che Ping, the 31st moon, day Ko Wei, a comet appeared in Ying Shih. It was seen in the east in the morning, and was more than 7 cubits in length. It pointed to the south-west and to the S D Wei, extending to the star Fun Moo. It gradually went afar off to the east. It approached the sun, and consequently could then not be seen. On the day Sin Sie it was again seen in the evening, to the north-west. It appeared like a star, without a bright envelope. It went to the east, increasing in size, and resembled a white vapour more than 3 cubits in breadth. It connected together Tso Wei, Koah Sing, and S D Fang. The head and (the end of) the tail were obscured by clouds. It still went to the east. It passed Wan Chang and Pih Tow and crossed the S D Wei. On the day Jin Woo the star had regained its luminous envelope. The comet was then about 10 cubits in length and about 3 in breadth. It pointed to the north-east. It passed over Woo Chay, at which time the white vapour was divided into two branches. It crossed the heavens, passing through Pih Hoo, Woo Choo Hoo, Moon Yuon, Tae Wei, and Woo Te Tao, into Woo Choo Hoo. It extended towards S D Keo, Kang, Te, and Fang. On the day Kwei Wei the comet was 15 cubits in length, and had round it a vapour resembling in form a Shing Ko (a kind of measure). Its course was thus from Ying Shih to S D Chang. In the north it altogether passed through 14 S D. It was visible for 67 days, after which the star, the vapour, and the comet, all disappeared.

Emperor Ying Tsung and epoch Che Ping, 1064-1067 3rd year, 1066 3rd moon, day Ke Wei, April 2 days, Sun Sze, April 24, Jin Woo, April 25, Kwoi Wei, April 26

S D Ying Shih, or Shih, determined by a Pegasus and stars near

Wei determined by ϵ , μ , ν , &c in Scorpio

Keo determined by α Vulpecula and another

Fang determined by α , δ , π , ρ in Scorpio

Kang determined by ι , κ , λ , θ Vulpecula

Te determined by α , β , γ , ν Librae

Chang determined by κ , λ , μ , &c Hydrus

Tso Wei, circle of perihelion apparition

Keh Sing, stars near the Pole

The Wu, space between stars in Leo and Vulgo

Fun Moo, α , η , π and others in Aquarius

Wan Chang, θ , ν , ϕ and others in Ursa Major

Pih Tow, α , β , γ , δ , &c in Ursa Major

Woo Chay, α , β , &c Aurigae and β Tauri

Pih Ho, α , β , &c Geminorum

Woo Choo Hlow, θ , ι Geminorum, and also two groups of small stars between the head of Vulgo and Corona Borealis. These must not be confounded together, the second Woo Choo Hlow referred to in the text appearing to be the last-mentioned stars.

Hien Yuan, Regulus and stars in Leo and Leo Minor

Woo Te Tso, β Leonis and other stars near

M T L

It is singular that this very remarkable comet is not noticed in the 'Kho Ke'. In the 'Tung Keen Kang Moo' the account is as follows: — 'In the reign of Yung Tsung, the 3rd year of the epoch Che Ping, a comet was seen in the west during the 3rd moon.' The 'Commentary' remarks, 'It resembled the planet Venus, and was 15 cubits in length. When it was in S D Poih it was like the moon.'

S D Poih determined by α , γ , δ , &c Tauri

This comet appears to have attracted much attention, and to have excited no little alarm in Europe, as we learn from contemporary writers that it was looked upon as a forerunner of various calamities among others, the death of Harold and the subsequent conquest of England by William the Norman, is attributed by them to the influence of this comet. Zonaras, the Greek historian, in his account of the reign of the Emperor Constantinus Ducus, describes it as having been as large as the full moon, and at first without a tail, on the appearance of which it diminished in size thus corroborating the Chinese accounts, as given in 'M T L' and the 'Tung Keen Kang Mu'.

250

A.D. 1095 November 17

In the reign of Shun Tsung, the 8th year of the epoch Ho Ning, the 10th moon, day Yih Wei, a star appeared in the south-east, in the middle of the degrees of S D Chin. It was like the planet Saturn, of a bluish white. On the day Ping Shin it produced towards the north west a luminous envelope, 3 cubits in length, pointing in a slanting direction to S D Chin. It thus resembled a comet. On the day Ting Yew the luminous envelope was 5 cubits in length. On the day Woo Seuh it was 7 cubits in length, pointing in a slanting direction towards Tso Hua. It went on until the day Ting Wei, when it entered the clouds and was no more seen.

Emperor Shin Tsung, 1068-1085, epoch Ho Ning, 1068-1077 8th year, 1075 10th moon, day Yih Wei, November 17, Ping Shin, November 18, Ting Yew, November 19, Woo Seuh, November 20, Ting Wei, November 29

S D Chin determined by β and others in Corvus
Tso Hua, γ Corvi

251

A.D. 1080 August 10

In the 31st year of the epoch Yuan Fung, the 7th moon, day Kwei Wei, a comet appeared in the north-west part of Tso Wai Yuan, to the south of Lang Wei. It resembled a white sparrow, 10 cubits in length. It pointed in a slanting direction to the south-east. Its place was in the middle degrees of S D Chin. On the day Ping Hsueh it went in a north westerly direction. Its place was then in the middle degrees of S D Yih. On the day Woo Tze it was 3 cubits in length, and went in a sloping direction across Lang Wei. On the day Kwei Maou (Kwei So) it entered Heon Yuen. On the day Ting Yew, the weather being thick, it could not be seen. On the day Kang Tze it again appeared in the morning, in the middle degrees of S I Chang, until the day Woo Woo, when, having been visible altogether for 36 days, it disappeared, and was no more seen.

Epoch Yuan Fung, A.D. 1078-1085 31st year, 1080 7th moon, day Kwei Wei, August 10, Ping Seuh, August 13, Woo Tze, August 15, Kwei So (or Kwei Maou, see below), August 20, Ting Yew, August 24, Kang So, August 27, Woo Woo, September 14

There is an obvious error in the original, the day Kwei Maou having been put for Kwei So. This is proved by summing up the days during which the comet was seen, which are said to have been 36. Rocking Kwei Maou as one, they will amount to 96, whereas with Kwei So their number will be 36, as recorded above.

S D Chin determined by β and others in Corvus

Yih determined by α and others in Crater

Chang determined by ϵ , λ , μ and others in Hydrus

Tso Wai Yuan, space between stars in Leo and Virgo

Lang Wei, stars in Coma Berenices

Heon Yuen, Regulus and others in Leo and Leo Minor

252

A D 1097 October 6

In the reign of Cho Tsung, the 4th year of the epoch Shaon Shing, the 8th moon, day Ke Yew, a comet appeared in the middle degrees of S D To. It resembled the planet Saturn. It was like a bright white vapour, 3 cubits in length. It pointed in a slanting direction to the star Pa in Tsoen She Yuon. In the 9th moon, day Jin Tsoo, the luminous envelope was 5 cubits in length. It entered Tsoen She Yuon. On the day Ke Wei it invaded Tsoen She Ilwan. On the day Kang Shin it was near To Two in Tsoen She Yuon. On the day Woo Shin it disappeared, and was no more seen.

Emperor Cho Tsung, A D 1086-1100, epoch Shaon Shing, 1094-1097 4th year, 1097 8th moon, day Ke Yew, October 6, day, Jin Tsoo, October 9, Ko Wei, October 10, Kang Shin, November 6, Woo Shin, November 14

S D To determined by α , β , γ , δ Librae

Tsoen She Yuon, space bounded by Scorpions

Tsoen She Ilwan, unascertained

Pa, ϵ Serpentis To Two, α Horologii

M T L

253

A D 1106 February 10

In the reign of Hwuy Tsung, the 5th year of the epoch Tsung Ning, the 1st moon, day Woo Souh, a comet appeared in the west. It was like a great Poi Kow. The luminous envelope was scattered. It appeared like a broken-up star. It was 60 cubits in length and was 3 cubits in breadth. Its direction was to the north east. It passed S D Kwei. It passed through S D Low, Wei, Maou, and Poih. It then entered into the clouds and was no more seen.

Emperor Hwuy Tsung, A D 1101-1125, epoch Tsung Ning, 1102-1106 5th year, 1106 1st moon, day Woo Souh, February 10

S D Kwei determined by β , δ , ϵ Andromedae and star 41 in Pisces

Low determined by α , β , γ Andromedae

Wei determined by the three stars in Musca

Maou determined by the Pleiades

Poih determined by α , γ , δ , ϵ , ζ Tauri

Poi Kow is a kind of vessel or measure

M T L

This appears to have been a large meteor, as it seems to have been seen for a short time only

254

A D 1110 May 29

In the 4th year of the epoch Te Kwan, the 5th moon, day Ting Wei, a comet appeared in S D Kwei and Low. Its luminous envelope was 6 cubits in length. It went to the north and entered Tsoen She Yuon. When in the north west it entered the clouds and was no more seen.

Epoch Te Kwan, A D 1107-1110 4th year, 1110 5th moon, day Ting Wei, May 29th

S D Kwei determined by β , δ , ϵ , & ζ Andromedae and stars in Pisces

S D Lew determined by α , β , γ Andromedae

Tsze Wei Yuen, circle of perpetual apparition

M T L

255

A D 1126 May 20

In the reign of Kin Tsung, the 1st year of the epoch Tsang Kang, the 6th moon, day Jin Seuh, a comet appeared in Tsoo Wei Yuen

The Commentary in the 'Tung Koen Keang Muh' adds, 'Its length was reckoned at 10 cubits. Its direction was to the north. It passed over Te Tso and swept Wan Chang.'

Emperor Kin Tsung and epoch Tsang Kang, A D 1126 1st year, 1126 6th moon, day Jin Seuh, May 20

Tsze Wei Yuen, circle of perpetual apparition

Te Tso, possibly Polaris, which is named Te a Herculis has also the same appellation

Wan Chang, ϕ , ν , ν Ursa Majoris

M T L, Tung Keon

256

A D 1126 December

In the intercalary 11th moon of the same year a comet was seen in the horizon

A D 1126 intercalary 11th moon, December

M T L

257

A D 1131 September

In the reign of Kaou Tsung, the 1st year of the epoch Shaou Hing, the 9th moon, a comet was seen

Emperor Kaou Tsung, A D 1127-1162, epoch Shaou Hing, 1131-1162 1st year, 1131 9th moon, September

M T L

258

A D 1132 January 5

In the 12th moon of the same year a comet was seen on the day Woo Yin

12th moon, 1132, day Woo Yin, January 5

M T L

259

A D 1132 August 14

In the 2nd year of the same epoch, the 8th moon, day Kee Yin, a comet was seen in S D Wei. In the 9th moon, day Kee Seuh, it disappeared

Epoch Shaou Hing, 2nd year, 1132 8th moon, day Kee Yin, August 14, day Kee Seuh, September 3

S D Wei determined by the three stars in Musca

M T L

260

A D 1145 April 26

In the 15th year of the same epoch, the 4th moon, day Woo Yin, a comet appeared in the degrees of the southern S D. In about 50 days it disappeared. On the day Ping Shin it was seen in the degrees of S D Tsan.

15th year of epoch Shao Hing, A D 1145 4th moon, day Woo Yin, April 26, day Ping Shin, May 14

S D Tsan determined by α , β , &c Orionis

M T L

261

A D 1145 June 4

In the 5th moon of the same year, day Ting S/o, a comet was seen. Its colour was a bluish white.

1145 5th moon, day Ting S/o, June 4

M T L

262

A D 1147 January 6

In the 16th year of the same epoch, 12th moon, day Woo Souh, a comet appeared in the south-west of S D Wei.

16th year, 1146 12th moon, day Woo Souh, 1147, January 6

S D Wei determined by α Aquarii and δ , ϵ Pegasus

M T L

263

A D 1147 February 12

In the 17th year of the same epoch, the 1st moon, day Yih Hoo, a comet appeared in the north east, in the S D Neu. On the 2nd day of the 2nd moon it was no longer visible.

17th year, A D 1147 1st moon, day Yih Hoo, February 12, 2nd moon, 2nd day, March 7

S D Neu determined by ϵ , μ , ν , &c Aquarii

M T L

264

A D 1151 August 21

In the 22nd year of the same epoch, 7th moon, day Ping Woo, a comet was seen in the north-east, in S D Tung. On the day Ting Wei the star was like the planet Jupiter. Its luminous envelope was 1 cubit in length.

22nd year, A D 1151 7th moon, day Ping Woo, August 21, day Ting Wei, August 22

S D Tung determined by γ , ϵ , λ , &c Geminorum

M T L

265

A D 1222 September 15

In the 10th year of Ning Tsung, the 15th year of the epoch Kea Ting, the 8th moon, day Kee Woo, a comet appeared in Yew Sho Te. Its luminous envelope was 30 cubits

in length. Its body was small, like the planet Jupiter. It was seen for 2 months. It passed through S D Te, Fang, and Sing, and then disappeared.

Emperor Ning Tsung, A.D. 1195-1224, epoch Koa Ting, 1208-1224 15th year, 1222 8th moon, day Koo Woo, September 15

S D Te determined by α , β , γ , ν Librae

Fang determined by β , δ , π , &c in Scorpio

Sin determined by Antares and others in Scorpio

Yew She Te, η , τ , ν Bootis

This is the last of the comets recorded in the 'Encyclopaedia of Ma Twan Lin'. Those which follow are taken chiefly from the Supplement to that work and the 'She Ko'.

266

A.D. 1232 October 18

In the reign of Le Tsung, the 5th year of the epoch Shao Ting, the intercalary 9th moon, day Kang Souh, a comet appeared in S D Koo

Emperor Le Tsung, A.D. 1225-1264, epoch Shao Ting, 1228-1233 5th year, 1232 intercalary 9th moon, day Kang Souh, October 18

S D Koo determined by α and ζ Virginis

267

A.D. 1240 January 31

In the 4th year of the epoch Koa He, the 1st moon, day Hin Wei, a comet appeared in Ying Shih.

Epoch Koa He, 1237-1240 4th year, 1240 1st moon, day Hin Wei, Jan 31

S D Shih determined by α , β Pegasi, &c

Ying Shih, α Pegasi

268

A.D. 1240 February 23

In the 1st moon of the same year, day Koa Woo, a comet passed over Yuh Lang, to the north west of the second star.

1240 1st moon, day Koa Woo, February 23

Yuh Lang, α , β , &c Casiopeia

This may possibly be a continuation of the account of the preceding comet.

269

A.D. 1264 July 26

In the 5th year of the epoch King Ting, 7th moon, day Koa Souh, at night, a comet appeared in S D Low. Its tail extended across the heavens. On the day Ko Mao it passed into S D Kwei. In the 8th moon, day Sin Sze, it entered S D Tsung. On the day Woo Woo it could not be seen. On the day Koa Tso it returned, and was seen in S D Tsan. On the day Sin Wei it was resolved into a reddish vapour.

Epoch King Tung, 1260-1264 7th moon, day Kee Seuh, July 26, day Ko Maou, July 31 8th moon, day Sun Sze, August 2, Woo Woo, September 8, Kee Tze, September 14, Sin Wei, September 21

S D Lew determined by δ , ϵ , &c Hydrus

Kwan determined by γ , δ , η , θ Cancer

Tsung determined by γ , ϵ , λ , μ , &c Geminorum

Tsan determined by α , β , γ , &c Orionis

LEAOU, A MINOR DYNASTY, A.D. 916-1125

270

A.D. 941 August 7

In the reign of Tae Tsung, the 4th year of the epoch Hwuy Tung, the 8th moon, day Jin Shin, there was a comet near the star Tsin

Emperor Tae Tsung, 927-947, epoch Hwuy Tung, 938-946, 4th year 8th moon, day Jin Shin, 941, August 9

Star Tsin, & Hercules

271

A.D. 1014 February 10

In the reign of Shing Tsung, the 31st year of the epoch Kao Tho, the 1st moon, day Yih Wei, a comet was seen in the west

Emperor Shing Tsung, 983-1031, epoch Kao Tho, 1012-1021 31st year, 1014 1st moon, day Yih Wei, February 10

272

A.D. 1066 April 24

In the reign of Taou Tsung, the 2nd year of the epoch Han Yung, the 3rd moon, day Jin Woo, a comet was seen in the east

Emperor Taou Tsung, 1055-1100, epoch Han Yung, or Han Ning, 1065-1074 and year, 1066 3rd moon, day Jin Woo, April 24

273

A.D. 1080 January 6

In the 5th year of the epoch Tao Kang, the 12th moon, day Ping Woo, a comet passed over S D Wei

Epoch Tao Kang, 1075-1084 5th year, 1079 12th moon, day Ping Woo, 1080, January 6

S D Wei determined by ϵ , μ , ν , &c in Scorpio

274

A.D. 1097 December 6

In the 31st year of the epoch Show Lung, the 10th moon, day Ko Sze, a comet was seen in the west

Epoch Show Lung, 1095-1110 31st year, 1097 10th moon, day Ko Sze, December 6th

KIN, A MINOR DYNASTY, A.D. 1118-1236

275

A.D. 1133 September 29

In the reign of Tae Tsung, 10th year of the epoch Teen Hwuy, 8th moon, day Sin Ilac, a comet appeared in Wan Chang

Emperor Tae Tsung and epoch Teen Hwuy, 1124-1135 10th year, 1133
8th moon, day Sin Ilac, September 29
Wan Chang, 0, ν, φ, &c Ursa Majoris

276

A.D. 1226 September 13

In the reign of Souen Tsung, the 6th year of the epoch Hing Ting, the 8th moon, day Ko Maou, a comet appeared in S D Koo and Kang, between Yew Cho To and Chow Ting. It pointed towards Tu Koo. In the 1st year of the epoch Yuan Kwang, 9th moon, day Ting Wei, it disappeared

Emperor Souen Tsung, 1217-1228, epoch Hien Ting, 1221-1226 6th year, 1226 8th moon, day Ke Maou, September 13 epoch Yuan Kwang, 1227-1228, 9th moon, day Ting Wei, September 12

S D. Koo determined by α and ξ Virginis
S D Kang determined by ι, κ, λ, 0 Virginis
Yew Cho Te, η, τ, ν Bootis
Chow Ting, small stars in Coma Boötis
Tu Koo, Arieturus

277

A.D. 1237 September 21

In the reign of the Emperor Gao Tsung, the 1st year of the epoch Teon Hing, the 9th moon, day Ko Yew, a comet was seen in the east. It was about 10 cubits in length, twisted and bent like an elephant's trunk. It appeared in S D Koo and Chin. It went to the south. On the 12th day it was 20 cubits in length. On the 16th day it could not be seen, on account of the brightness of the moon. On the 27th day, in the 5th watch of the night, it reappeared, and was seen in the south-east. It was then about 40 cubits in length. On the 1st day of the 10th moon it began to fade. It was visible altogether for 48 days

Emperor Gao Tsung, 1229-1237, epoch Teon Hing, 1st year, 1237 9th moon, day Ke Yew, September 21 5th watch of night, 1 to 3 A.M.

S D Koo determined by α and ξ Virginis
S D Chin determined by β, &c Corvi

Biot places this comet under 1232, October 17. According to the Tables, 1232 was the 4th year of the epoch Ching Tu. Biot's day is right for 1232, but not for 1237. No comet is mentioned in the 'She Ko' as having been seen in 1232. The 'Tung Koem' says a comet was seen in that year in Koo, but gives no particulars. The above is from the Supplement to 'Ma Tuan Lin'

YUEN DYNASTY, A.D 1280-1367

The whole of the descriptions which follow are from the Supplement to 'M T L' and the 'She Ko'

278

A.D 1264 July 26.

In the reign of She Tscoo, the 1st year of the epoch Cho Yuen, 7th moon, a comet appeared in S D Kwei. In the evening it was seen to the north-west. It passed through Shang Tao and swept Wan Chang in Tsoe Wei, as well as Pih Tow. In the morning it was seen in the north east. It was visible altogether for about 40 days.

Emperor She Tscoo, 1264-1294, epoch Cho Yuen the same 1st year, 1264.

According to the Chinese Chronological Tables, the Tartar Emperor She Tscoo commenced his reign over China A.D 1280, which was the 17th year of his epoch, Cho Yuen. Hence the 1st year was 1264. His Tartar name was Ilwuh Peh Loo hence the Kublai of European writers.

S D Kwei determined by γ , δ , η , θ Cancer

Tsoe Wei, the circle of perpetual apparition

Shang Tao, ι , κ in fore foot of Ursa Major

Pih Tow, α , β , δ Ursa Majoris

The account in the 'She Ko' differs considerably, having some additional particulars. It is as follows —

In the reign of She Tscoo, the 1st year of the epoch Cho Yuen, in the autumn, day Koa Souh, a comet appeared in S D Kwei and Lew. In the evening it was seen in the north-west. Its brightness illuminated the heavens. It measured 100 culms in length. It passed through Shang Tao. It swept Tsoe Wei, Wan Chang, and Pih Tow. In the morning it was seen in the north east. It was visible altogether for about 40 days.

Emperor She Tscoo, as above, Cho Yuen, 1st year, 1264 7th moon, day Koa Sou, July 26

S D Kwei determined by γ , δ , η , θ Cancer

S D Lew determined by δ , ι and others in Hydra

For the remaining asterisms see above

279

A.D 1277 March 9

In the 14th year of the same epoch, 2nd moon, day Kwei Hae, a comet appeared in the north-east. It was about 4 culms in length.

Cho Yuen, 14th year, 1277 2nd moon, day Kwei Hae, March 9.

280

A D 1293 November 7

In the 30th year of the same epoch, 10th moon, day Kang Yin, a comet entered Two Wei Yuan. Its course was towards Tow Kwei. Its luminous envelope was more than 1 cubit in length. It was visible for 1 moon and then disappeared.

Obi Yuon, 30th year, 1293 10th moon, day Kang Yin, November 7

Tze Wei Yuan, circle of perpetual apparition

Tow Kwei, the square in the seven stars of Ursa Major. The Polo star is sometimes called Tow Kwei.

Biot has Pih Tow for Tow Kwei

281

A D 1299 June 24

In the reign of Ching Tsung, the 2nd year of epoch Ta Tih, the 12th moon, day Koa Souh, a comet appeared beneath the stars Tze and Sun.

Emperor Ching Tsung, 1295-1307, epoch Ta Tih, 1297-1307 2nd year, 1298 12th moon, day Koa Souh, 1299, January 24

Tze, λ Columbae Sun, θ, κ Columbae

282

A D 1301 September 16

In the 5th year of the same epoch, 9th moon, day Yih Chow, from the 8th moon, day Keng Shin, a comet appeared in $24^{\circ} 40'$ of the S D Tsung. It was like the great star in Nan Ho. Its colour was white. Its length was 5 cubits. Its direction was towards the north-west. It afterwards passed to the south of Wan Chang and Tow Kwei. It swept Tao Yang. It also swept Teen Ko of Pih Tow, Tze Wei Yuan, San Kung, and the stars in Kwan So. Its length was about 10 cubits. It passed into Teen She Yuan, to the east of the stars Pa and Shuh, and to the south of the stars Leang and Tzow, and above the star Sung. It was then a full cubit in length. It was altogether visible for 46 days, and then (on the day first mentioned) disappeared.

It is to be remarked, that the description of this comet commences with the day Yih Chow, being that of its disappearance. A few words have been added to make the description more intelligible. It is only slightly mentioned in the 'She Ko'.

Epoch Ta Tih, 3rd year, 1301 5th moon, day Kang Shin, September 16, 9th moon, day Yih Chow, October 31

S D Tsung determined by γ, ε, λ, &c Geminorum.

Tze Wei Yuan, circle of perpetual apparition

Teen She Yuan, space bounded by Scorpis

Nan Ho, α, β, &c Canis Minoris. The great star, Procyon

Wan Chang, θ, ν, φ, &c Ursa Majoris

Tow Kwei, the square in the seven stars of Ursa Major

Tao Yang, χ Ursa Majoris

Pih Tow, α , β , γ , &c Ursa Majoris
 Kwan So, Corona Borealis
 μ , ϵ Serpentis Shuh, α , λ Serpentis
 Leang, δ Ophiuchi Tsoo, ϵ Ophiuchi
 Sung, π Ophiuchi Teen Ke, γ Ursa Majoris

283

A D 1304 February 3

In the 8th year of the same epoch, the 3rd moon, day Yih Chow, from the day Kang Souh of the preceding 12th moon a comet was seen. It was nearly a full cubit in length. It pointed towards the south-east. Its colour was white. Its place was in the 11th degree of S D Shih. It gradually increased to about a cubit in length, and then it pointed towards the north west. It swept Tang Shay and entered Tsoe Wei Yuen, and (on the day first mentioned) disappeared. It was visible altogether for 74 days.

As in the account of the preceding comet the day of disappearance is placed first. The following extract from the annals of the Yuan dynasty in the 'She Ke,' may be of service in explaining this rather ambiguous mode of expression. It relates to the same comet, and is to be found in the division Yuen Hie, section 4.

Ta Tih, 7th year, 12th moon, day Kang Souh, a comet about a cubit in length was seen in the 11th degree of S D Shih. It entered Tsoe Wei Yuen. In the 8th year, 3rd moon, day Yih Chow, the comet began to disappear. It was visible altogether for 74 days.

Epoch Ta Tih, 7th year, 1303 12th moon, day Kang Souh, 1304, Feb 3.
 8th year, 3rd moon, day Yih Chow, April 18, 1304

S D Shih determined by α , β , &c Pegasus

Tsoe Wei Yuen, circle of perpetual apparition

Tang Shay, π Cygni and stars in Andromeda and Lacerta, 22 in number

284

A D 1313 April 13.

In the reign of Jin Tsung, the 2nd year of the epoch Hwang King, 3rd moon, day Ting Wei, a comet appeared in the eastern part of S D Tsung.

Emperor Jin Tsung and epoch Hwang King, A D 1312-1320 2nd year, 1313
 3rd moon, day Ting Wei, April 13

S D Tsung determined by γ , ϵ , λ , μ , &c Geminorum.

285

A D 1315 November 28

In the 2nd year of the epoch Yen Yow, the 11th moon, day Ping Woo, a strange star appeared, which afterwards became a comet. It entered Tsoe Wei Yuen. It passed through the S D from Chin to Peih, being 15 of those divisions. The next year, 2nd moon, day Kang Yin, it disappeared.

Epoch Yen Yew, 1314-1320 2nd year, 1315 11th moon, day Ping Woo,
November 28 3rd year, 2nd moon, day Kang Yin, 1316, March 12

S D Peah determined by γ Pegasi and a Andromedae

S D Chin determined by β and others in Corvus

286

A D 1337 May 4

In the reign of Shun Ta, the 3rd year of the epoch Che Yuem, in the summer, 4th moon, day Kee Seuh, there was a comet in Yuh Lang. It remained until the 7th moon, day Sin Yin, when it finished its course in Kwan So.

Shun Ta, 1333-1367, epoch Che Yuem, 1335-1340 3rd year, 1337 4th moon, day Kee Seuh, May 4, 7th moon, day Sin Yin, July 31

Yuh Lang, α , β , γ and others in Cassiopeia

Kwan So, Corona Borealis

But consider this comet as the same as the next. It is, however, treated as a separate one both in 'Ma Twan Lin' and in the 'Sho Ko,' in which there is no intimation that the comet which follows, although on the same page, is in any way connected with it. It is, therefore, treated as a separate comet here.

287

A D 1337 June 26

In the reign of Shun Ta, the 3rd year of the epoch Che Yuem, the 5th moon, a comet was seen to the north east. It resembled the great star in Tsoen Chuen. Its colour was white. It was about 1 cubit in length. The tail pointed to the south-west. Its place was estimated to be in the 5th degree of S D Maou. On the day Woo Shin its course was to the south-west. On the succeeding days it gradually increased in velocity. On the day Sin Wei, at the 6th moon, the luminous envelope had lengthened to about 2 cubits. On the day Ting Chow it swept Shang Chung. On the day Ko Maou the luminous envelope had increased still more in length, being then about 3 cubits. It entered Yuan Wei. On the day Jin Woo it swept Hwa Kao and the star Keang. On the day Yih Yew it swept the great star Kow Chung, and extended to Tsoen Hwang Tu To. On the day Ping Souh it passed through Sze Foo and crossed Kou Sin. On the day Kee Woo it left Yuan Wei. On the day Ting Yew it passed out of Tsoen Wei Yuem. On the day Woo Seuh it entered Kwan So and swept Tsoen Ko. In the 7th moon, day Kang Tsoe, it swept Ho Keen. On the day Kwei Maou it passed the stars Chung and Tsin and entered Tsoen Sho Yuem. On the day Ping Woo it swept Loo Sze. On the day Ko Yew the moon was so bright that the luminous envelope could scarcely be distinguished. The comet left Tsoen Sho Yuem and swept the star Leang. On the day Sin Yew the luminous envelope had greatly diminished in length. It was then in S D Fang, above the star Keen Po, and directly west of the middle star of the asterism Fa. It was not easy to ascertain exactly the place of the comet after it had gradually gone to the south. It was visible altogether for 63 days. Its course was from S D Maou to S D Fang, making altogether 15 S D through which it passed, and afterwards disappeared.

The preceding account is from the Supplement to 'Ma Twan Lin,' and it must be observed that in the original, as I have it, an error occurs, the epoch there given being Che Ching instead of Cho Yuen. That this is really an error is proved by the following account of the same comet, as it is given in the 'She Ko'—

'In the 3rd year of the epoch Che Yuen, the 5th moon, day Ting Maou, a comet was seen in the north east. It was like the great star in Tsoen Chuan. Its colour was white. It was about 1 cubit in length. The tail pointed to the southwest. It was altogether visible for 63 days. (Its course was) from S D Maou to S D Fang. It passed through 15 S D and then disappeared.'

The error is accordingly corrected in the text given, and does not occur in Biot. The day of the comet's first appearance (Ting Maou), which does not appear in 'M T L,' is also given in this extract from the 'She Ko.' The comet appears to have been very carefully observed, and its course registered, almost day by day, until it went so far to the south as to render the observations difficult, and, consequently, uncertain. It must also be noticed, that the comet is described as passing through 15 S D, viz from Maou (the Plough) to Fang (stars in Scorpio). Now as the greater number of the observations were made while the comet was within the circle of perpetual apparition, where the degrees are greatly contracted, such a circumstance could easily occur.

Epoch Che Yuen, 3rd year, 1337 5th moon, day Ting Maou, June 26 6th moon, day Sun Wei, June 30, Ting Chow, July 6, Ko Maou, July 8, Jin Woo, July 11, Yih Yew, July 14, Ping Souh, July 15, Koa Woo, July 23, Ting Yew, July 26, Woo Souh, July 27 7th moon, Kang Ta-o, July 29, Kwoi Maou, August 1, Ping Woo, August 4, Ko Yew, August 7, Sin Yow, August 19

S D Maou determined by the Plough

S D Fang determined by β , δ , π , &c in Scorpio

Tsoen She Yuen, space bounded by Scorpions

Tsoen Chuan, α , β , δ , &c Pegasus The great star, a Pegasus

Shang Ching, A 579 Camelopardalis (Reeves)

Yuen Wei, stars in Draco

Hwa Kae, stars in Camelopardalis Kang, unascertained

Kow Chung, a Ursae Majoris

Tsoen Hwang Ta Te, Polaris

Sze Foo, four small stars near the Pole

Keu Sin, unascertained

Kwan So, Corona Borealis

Tsoen Ka, θ and other small stars in Hercules

Ho Keen, γ Herculis Ching, γ Serpentis Tsin, χ Herculis

Lee Sze, λ Ophiuchi and other stars near

Leang, δ Ophiuchi

Keem Pe, ν in Scorpio

Fa, ϵ , ψ , σ Librae (Reeves) Stars in Scorpio (Noel)

288

A D 1340 March 24

In the 6th year of the same epoch, 2nd moon, day Ke Yew, a comet appeared resembling the great star in S D Fang. Its colour was white. In appearance it resembled a mass of the refuse of silk. Its length was about half a cubit. The tail pointed to the south-west. Its place was in the seventh degree of S D Fang. It went slowly to the north west until the 31st moon, day Kang Shin. It was altogether visible for 32 days.

The Yuon, 6th year, 1340 2nd moon, day Ke Yow, March 24, 31st moon, day Kang Shin, April 24

S D Fang determined by β , δ , π in Scorpio

The great star in Fang, β in Scorpio. Possibly Antares is really the star meant

289

A D 1351 November 24

In the 11th year of the epoch Cho Ching, on the day Sun Hua, a comet was seen in S D Kwei. On the day Kwei Chow it was seen in S D Low. On the day Koa Yin it was in S D Wei. On the day Yih Maou it was still in that division. On the day Png Shin it was seen in S D Maou. On the day Ting S/o it was seen in S D Peah.

Epoch Cho Ching, 1341-1367 11th year, 1351 11th moon, day Sun Hua, November 24, Kwei Chow, November 26, Kon Yin, November 27, Yih Maou, November 28, Ping Shin, November 29, Ting S/o, November 30

S D Kwei determined by α and others in Andromeda and Pisces

Low determined by α , β , γ Aries

Wei determined by the three stars in Musca

Maou determined by the Plough

Peah determined by α , γ , δ , &c Tauri

290

A D 1356. September 21

In the 16th year of the same epoch, the 8th moon, day Koa Souh, a comet was seen precisely in the east. It appeared in Hoen Yuen, in the angle to the left of the great star in that asterism. Its colour was a bluish white, the tail pointed to the south west. Its length was about 1 cubit. It was in $17^{\circ} \frac{1}{2}$ of the S D Chang. In the 10th moon, day Woo Woo, it disappeared. It was traced to the north-west for about 40 days.

Epoch Cho Ching, 16th year, 1356 8th moon, day Koa Souh, September 21

Hoen Yuen, Regulus and γ , ϵ , η , λ and others in Leo and Leo Minor

The great star in Hoen Yuen, Regulus

291

A D 1360 March 12

In the 20th year of the same epoch, 31st moon, day Woo Tare, there was a comet in the north east.

The Ching, 20th year, 1360 31st moon, day Woo Tare, March 12

292

A D 1362 March 5

In the 22nd year of the same epoch, 2nd moon, day Yih Yew, a comet was seen. Its luminous envelope was about a cubit in length. Its colour was a bluish white. Its place was in $7^{\circ} 20'$ of S D Wu. On the day Ting Yew the comet passed near the western star of Le Kung. At the end of the 2nd moon the luminous envelope was about 20 cubits in length. In the 3rd moon, day Woo Shin, the comet could not be seen as a star, but only as a white vapour of a curved form, extending across the heavens and pointing to the west. It swept Tu Keo. On the day Jin Sso the comet passed before Tse Yang, it had then the appearance of a star without a tail. In form it resembled a great wine-cup. The colour was white, like the obscure twilight. Its place was in the 6th degree of S D Maou. On the day Woo Woo it began to disappear.

The account of this comet in the 'She Ke' commences thus — 'On the day Yih Yew a comet was seen in S D Wu. Its luminous envelope was about 10 cubits in length.' The remainder is nearly the same as in 'M T L,' the difference being merely verbal.

Ché Ching, 22nd year, 1362 2nd moon, day Yih Yew, March 5, Ting Yew, March 17, Woo Shin, March 28, Sin Tsao, April 1, Woo Woo, April 7

S D Wu determined by α Aquarii and θ, ε Pegasus

S D Maou determined by the Pleiades

Le Kung, three groups of two stars each in Pegasus they are λ, μ, η, ο, ν τ

Tu Keo, Arotusus Tao Yang, χ Ursa Majoris

293

A D 1362. June 29

In the same year, the 6th moon, day Sin Sso, a comet was seen in Tsoe Wei Yuan. Its place was in $2^{\circ} 45'$ of S D New. Its colour was white. Its luminous envelope was about a cubit in length, pointing to the south east. Its course was to the south west. On the day Woo Tsoe the luminous envelope of the comet swept Shang Tsoe. In the 7th moon, day Yih Maou, it began to disappear.

Ché Ching, 22nd year, 1362 6th moon, day Sin Sso, June 29, day Woo Tsoe, July 6 7th moon, day Yih Maou, August 2

S D New determined by α, β, & ε Cepheus

Tsoe Wei Yuan, a halo of perpetual apparition

Shang Tsoe, θ Draconis

294

A D 1363 March 16

In the 23rd year of the same epoch, 3rd moon, day Sin Chow, the 1st day of the moon, a comet was seen in the east. It was visible during that moon, and then disappeared.

Ché Ching, 23rd year, 1363 3rd moon, day Sin Chow, March 16

295

A D 1366 October 25

In the 26th year of the same epoch, 9th moon, day Kang See, a comet was seen in Tsoo Wei Yuen, near the star Kwan in Pih Tow. Its colour resembled that of a handful of meal. It appeared nearly as large as a Tow measure. Its course was to the south-east, and it passed near to the star Teen Kae. On the day Sun Chow the place of the comet was in $18^{\circ} 48'$ of S D Wei. On the day Sun Yin it was in $2^{\circ} 44'$ of S D New. On the day Kwoi Maou the comet was in $9^{\circ} 48'$ of S D New. On the day Kee Shin it was in $0^{\circ} 48'$ of S D Hsu. On the day Yih See the comet appeared in Tsoo Wei Yuen, between the stars Kwan and Yuh Kang in Pih Tow. It was then in S D Chin. It went to the south-east and passed over Teen Kae. It traversed Tsoo Tsoo, Leen Taou, and S D Kou, to the western star of Luy Peah Chin, where it began to disappear.

Such is a nearly literal translation of the account of this comet in the Supplement to 'Ma Twan Lun,' and it is not at all surprising that Biot should make the following remark, 'Le marche indique pour cette comete est très singulière,' as nothing can be more inconsistent than that a comet, after a long course from Ursa Major to Aquarius, where it was observed on Oct 29, should on the very next day, Oct 30, be found once more in Ursa Major, in the same place whence it started, and again take its course southward, in the same direction as at first. But if the narrative in the original be carefully examined, it will be found to divide readily into two distinct portions, the one giving the course of the comet through the S D, and the other that through some of the asterisms in that course. All that is required is to read the account according to this view, and a consistent narrative will be the result. Let, then, the concluding observations be read thus,—'On the day Yih See (October 30) the comet (after having been first seen in Tsoo Wei Yuen, between the stars Kwan and Yuh Kang in Pih Tow, at which time it was in S D Chin, then going to the east, passing near Teen Kae, and traversing Tsoo Tsoo, Leen Taou, and S D Hsu), arrived at the western star of Luy Peah Chin, where it disappeared.' In confirmation of this view it may also be remarked, that the asterisms mentioned in this second portion will all be found in the path of the comet through the S D mentioned, supposing them to be carried to the Pole, and thus the whole account becomes perfectly consistent. It must also be remarked, that in these Chinese accounts of comets there are several examples of the latest observation being that first mentioned. Thus, in the comets of 1301, September 16, and 1315, November 28, the day of the disappearance is placed first, as in the second portion of the preceding narrative.

Chie Ching, 26th year, 1366 9th moon, day Kang See, October 25, Sun Chow, October 26, Jin Yin, October 27, Kwei Maou, October 28, Kee Shin, October 29, Yih See, October 30

S D Wei determined by ϵ , μ , ν , &c Aquarius

Now determined by ϵ , μ , ν , &c in Scorpio

Hsu determined by β Aquarius, &c

Chin determined by β Corvi and others

Tsoo Wei Yuen, circle of perpetual apparition

Comets observed in China

Kwan, 8 Ursa Majoris
 Yuh Kang, 9 Ursa Majoris
 Pih Tow, α , β , &c Ursa Majoris
 Teen Kao, β , γ Draconis
 Tuan Tae, β , δ , &c Lyrae
 Leen Taou, η , θ Lyrae
 Luy Peah Chin, small stars in Aquarius and Pisces.

MING DYNASTY, A.D. 1368-1644

296

A.D. 1368 February 7

In the reign of Tae Tscoo, the 1st year of the epoch Hung Woo, 1st moon, day Kang Yin, a comet was seen in S D Maou and Peah

Emperor Tae Tscoo and epoch Hung Woo, 1368-1398 1st year, 1368 1st moon, day Kang Yin, February 7

S D Maou determined by the Pleiades

S D Peah determined by α , γ , δ , ϵ , &c Tauri

297

A.D. 1368 April 8

In the 3rd moon of the same year, day Sin Maou, a comet appeared in S D Maou, to the north, between Ta Lang and Teor Chuon. It was about 8 cubits in length, and pointed towards Wan Chang. It came near Woo Chay. In the 4th moon, day Ko Yew, it disappeared to the north of Woo Chay

1368 3rd moon, day Sin Maou, April 8, Ko Yew, April 26

S D Maou determined by the Pleiades

Ta Lang, β , &c Persei

Woo Chay, α , β , &c Auriga and β Tauri

Wan Chang, θ , ν , & Ursa Majoris

Teen Chuan, α , γ , δ , &c Persei

This was possibly the same as the preceding comet.

298

A.D. 1373 May

In the 6th year of the same epoch, 4th moon, three comets entered Tae Wei Yuen

Hung Woo, 6th year, 1370 4th moon, May

Tae Wei Yuen, circle of perpetual apparition

299

A.D. 1391 May 23

In the 24th year of the same epoch, 4th moon, day Ping Tsao, there were two comets. One entered Tae Wei Yuen by the Chung Ho gato. It passed near Tsoen Chwang. The other passed near Luh Kao, and swept Woo To Nuy Tsao

Hung Woo, 24th year, 1391 4th moon, day Ping Tse, May 13
 Tsoo Wai Yuen, circle of perpetual appearance
 Chung Ho Mun, space between α and β Draconis
 Teen Ohwung, small stars near θ Draconis
 Luh Ksa, small stars in Camelopardalis
 Woo To Nuy Tsoo, small stars near Polaris

300

A.D. 1407 December 14

In the reign of Chung Tsoo, 5th year of epoch Yung Lo, 11th moon, day Ping Yin, a comet was seen

Emperor Chung Tsoo and epoch Yung Lo, 1403-1424 5th year, 1407 day Ping Yin, December 14.

301

A.D. 1431 May 15

In the reign of Seuen Tsung, the 6th year of the epoch Seuen Tih, 4th moon, day Woo Souh, there was a comet in the eastern part of S D Tsiung. It was about 5 cubits in length

Emperor Seuen Tsung and epoch Seuen Tih, 1426-1435 6th year, 1431 4th moon, day Woo Souh, May 15

S D Tsiung determined by γ , ϵ , λ , &c Geminorum

Biot makes the date of this Kang Souh May 27, which is also correct as to the day, it being a subsequent date

302

A.D. 1432 February 3

In the 7th year of the same epoch, the 1st moon, day Jin Souh, a comet appeared in the east. It was about 10 cubits in length the tail swept Teen Tsin. It went to the south east. In the 10th moon it began to disappear

Biot has, 'After 10 days it began to disappear,' which is the most probable reading. It is not in 'M T L.'

Seuen Tih, 7th year, 1432 1st moon, day Jin Souh, February 3, 10th moon, November

Teen Tsin, α , γ , δ , ϵ and others in Cygnus

303

A.D. 1432 February 29 or October 26

In the same moon, on the day Woo Tsoo, another comet appeared in the west. After 17 days it disappeared

It is not clear whether this refers to the 1st or to the 10th moon. If the 1st, then Woo Tse will be February 29, if the 10th, October 26

304

A D 1433 September 15

In the 8th year of the same epoch, the intercalary 8th moon, day Jin Sze, a comet appeared in Teen Tsang. It was more than 10 cubits in length. On the day Ko Sze it entered Kwan So and swept Tseh Kung. On the day Ko Maou it again entered Teen She Yuen and swept the star Tam. It was visible for 24 days, and then disappeared.

Sesun Thih, 8th year, 1433 intercalary 8th moon, day Jin Tse, September 15, Ke Sze, October 2, Ke Maou, October 12

Teen Tsang, θ , ι , κ Bootis

Kwan So, Corona Borealis Tsin, a Horologis

Tseh Kung, δ , μ and others in hand of Bootis

Teen She Yuen, space bounded by Serpens

305

A D 1439 March 25

In the reign of Ying Tsung, the 4th year of epoch Ching Tung, the intercalary 2nd moon, day Ke Chow, a comet was seen in S D Chang. It was large, and like a ball. On the day Ting Yow it was about 50 cubits in length. It went to the west. It swept Tsew Ke. It then went to the north and passed into S D Kwei.

Emperor Ying Tsung and epoch Ching Tung, 1436-1439 Ching Tung, 4th year, 1439, intercalary 2nd moon, day Ke Chow, March 25 Ting Yow, April 2

S D Chang determined by δ , κ , λ , μ Hydrius

S D Kwei determined by γ , δ , η , θ Cancer

Tsew Ke, ξ , ψ , ω Leonis and κ , ξ Cancer

306

A D 1439 July 12

In the 6th moon of the same year, day Woo Yin, a comet was seen in S D Peih, near the asterism so called. It was about 10 cubits in length. It pointed towards the south-west. It was visible altogether for 55 days, and then disappeared.

1439 6th moon, day Woo Yin, July 12

S D Peih determined by γ Pegasi and α Andromedae

307

A D 1444 August 6

In the 9th year of the same epoch, the 7th moon, day Kang Woo, a comet was seen in Tae Wei Yuen, to the east. It was more than 10 cubits in length. It gradually increased in length until the intercalary 7th moon, day Ko Maou, when it entered S D Kee and disappeared.

Ching Tung, 9th year, 1444 7th moon, day Kang Woo, August 6, Ko Maou, August 15

S D Kee determined by α and ζ Virginis.

Tae Wei Yuen, space within stars in Leo and Virgo

308

A D 1449 December 20

In the 14th year of the same epoch, 12th moon, day Jin Tze, a comet was seen in Teon She Yuen, near to She Low. It passed through the degrees of S D Wei. It was 2 cubits in length. It was soon until the day Yih Hae, when it disappeared.

Chung Ting, 14th year, 1449 12th moon, day Jin Tze, December 20, day Yih Hae, 1450, January 12

S D Wei determined by α , μ , ν , &c in Scorpio

She Low, μ Ophiuchi

Teon She Yuen, space bounded by Scorpions

309

A D 1450 January 19

In the reign of King Te, the 1st year of the epoch King Tae, the 1st moon, day Jin Woo, a comet appeared just without the boundary of Teon She Yuen. It swept Teon Ke.

Emperor King Te and epoch King Tae, 1450-1456 1st year, 1450 1st moon, day Jin Woo, January 19

Teon She Yuen, space bounded by Scorpions

Teon Ke, small stars near 0 Herculis

This is most likely the same comet as the preceding one.

310

A D 1452 March 21

In the 3rd year of the same epoch, 3rd moon, day Koa Woo, the 1st day of the moon, there was a comet in S D Poh.

King Tae, 3rd year, 1452 3rd moon, day Koa Woo, March 21

S D Poh determined by α , γ , δ , ϵ , &c Tauri

Biot makes this 2nd moon March 5. March 21 is correct for the day Koa Woo. March 5, in 1452, was Woo Yin.

311

A D 1456 May 27

In the 7th year of the same epoch, the 4th moon, day Jin Souh, a comet was seen to the north-east, in S D Wei. It was 2 cubits in length, and pointed towards the south-west. In the 5th moon, day Kwoi Yow, it gradually lengthened to about 10 cubits. On the day Woo Tze it was seen to the north-west, in S D Lew. It was then about 9 cubits in length. It swept over the stars Ilon Yuen. On the day Kea Woo it was seen in S D Chang. It was then about 7 cubits in length. It swept the north of Teo Wai. It went to the south west. In the 6th moon, day Jin Yin, it entered Teo Wai Yuen. It was then about 1 cubit in length.

King Tae, 7th year, 1456 4th moon, day Jin Souh, May 27, 5th moon, day

Kwoi Yow, June 7, 6th moon, day Jin Yin, July 6

S D Wei determined by the three stars in Musca

S D Lew determined by δ , ϵ , ζ , θ Hydæ
 Chang determined by κ , λ , μ , &c Hydæ
 Ilcen Yuen, Regulus and stars in Leo and Leo Minor
 Tso Wei Yuen, space between stars in Leo and Virgo

312

A.D. 1457 January 14

In the 12th moon of the same year, day Kea Yin, another comet was seen in S D Peih. It was half a cubit in length. It went to the south-east. It gradually lengthened until the day Kwei Wu, when it disappeared.

King Tae, 7th year, 1456 12th moon, day Kea Yin, 1457, January 14, Kwei Wu, January 23

S D Peih determined by α , γ , δ , ϵ , &c Tauri

313

A.D. 1457 June 15

In the reign of Ying Tsung, the 1st year of the epoch Tsoen Shun, the 5th moon, day Ping Seuh, a comet was seen in S D Wei. It was like the star Chaou Yaou. It went to the east. Its luminous envelope was half a cubit in length, pointing to the south-west. In the 6th moon, day Kwei Sso, the 1st day of the month, it was seen in S D Shih. It was then about 10 orbits in length. The tail extended to the east of S D Peih, and was near Teon Ta Teeang Koun, the 3rd star in Kouen She, S D Tsing, and the 2nd southern star in Shwuy Wei.

Emperor Ying Tsung, 1436-1464. This Emperor was taken prisoner by the Tartars in 1450 and restored in 1457, when he adopted the epoch Tsoen Shun, 1457-1464 1st year, 1457 5th moon, day Ping Seuh, June 15, day Kwei Sso, June 22

S D Wei determined by α Aquarii and θ , ϵ Pegasi

Shih determined by α , β Pegasi and others

Peih determined by γ Pegasi and α Andromedæ

Tsing determined by δ , ϵ , λ , μ , &c Geminorum

Chaou Yaou, β Bootis Kouen She, ν Persei

Tsoen Ta Teeang Koun, γ and others in Andromeda and Triangulum

Shwuy Wei, ζ , θ , ϵ , π Canis Minoris

314

A.D. 1457 October 26

In the 10th moon of the same year, day Ko Hao, a comet was seen in S D Koo. It was about half a cubit in length, pointing to the north. It passed near the northern star of Keo and the eastern star of Ping Tau.

1457 10th moon, day Ko Hao, October 26

S D Koo determined by Spica and another in Virgo

Northern star, ζ Virginis

Ping Tau, θ and another in Virgo

315

A D 1461 August 5

In the 5th year of the same epoch, 6th moon, day Woo Souh, a comet was seen in the east. It pointed to the south west. It entered S D Tung. In the 7th moon, day Ping Yin, it began to disappear.

Toon Shun, 5th year, 1461 6th moon, day Woo Souh, August 5, day Ping Yin, September 2

S D Tung determined by γ , ϵ , λ , &c Geminorum

316

A D 1465 March

In the reign of Hoon Tsung, 1st year of the epoch Chung Hwa, 2nd moon, a comet was seen. In the 3rd moon it was again seen, in the north west. It was about 30 cubits in length. It was visible during the 3rd moon, and then disappeared.

Emperor Hoon Tsung and epoch Chung Hwa, 1465-1467 1st year, 1465 2nd moon, March, 3rd moon, April

317

A D 1468 September 18,

In the 4th year of the same epoch, the 9th moon, day Ko Wei, there was a star seen in the 5th degree of S D Sing. For 5 days it went to the north east. Its luminous envelope was about 30 cubits in length. The tail pointed to the south west. It changed into a comet. It was afterwards seen in the morning, in the east. In the evening it was seen in the south of S D Shih. It passed through San Kang, Pih Tow, Yaou Kwang, and Tsoh Kung. It turned and entered Toon Sho Yuen. It left Yuen and gradually decreased. It passed over the first star to the west of Toon Ping. In the 11th moon, day Kang Shin, it disappeared.

Chung Hwa, 4th year, 1468 9th moon, day Ko Wei, September 18, Kang Shin, December 8,

S D Sing determined by α and others in Hydrus

S D Shih determined by α , β Pegasi, &c.

Yaou Kwang, η Ursa Majoris

Tsoh Kung, δ , μ and others in Bootes

Toon Sho Yuen, space bounded by Scorpions

Toon Ping, unascertained

318

A D 1472 January 16

In the 7th year of the same epoch, 12th moon, on the day Ko Souh, a comet was seen in Toon Teon. It pointed towards the west. It suddenly went to the north. It passed through Yow Shoo Te. It swept Shang Teeang in Tai Wei Yuen, and also Hing Chin, Tao Tso, and Tsung Kwan. The tail pointed directly to the west. It swept across Tso Wei Yuen and Lang Wei. On the day Ko Maou the luminous envelope had lengthened greatly. It extended from east to west across the heavens. It went northwards about 28 degrees. It passed near Toon Tsung and swept Pih Tow, San Kung,

and Tae Yang. It entered Tae Wei Yuan, and is said to have been seen in full daylight. It passed near to the stars Te IIwang, Kwei in Pih Tow, Shoo Tsoo, How Kung, Kow Shun, Tean Choo, San Sze, Leen Tao, Chung Tae, Toon IIwang, Ta Ta, Shang Wei, Ko Tsoo, Wan Chang, and Shang Tao. On the day Yih Yew it went to the south, and passed through Tean Ho, Toon Yen, Wao Ping, and Tean Yuan. In the 1st moon of the 8th year, on the day Ping Woo, it went towards the group Wao Ping, in D Kwei. It gradually faded, and it was some time before it finally disappeared.

Chung Hwa, 7th year, 1471 12th moon, day Kon Souh, 1472, January 16, Ke Macu, January 21, Yih Yew, January 27 8th year, 1st moon, day Ping Woo, 1472, February 17

S D Lew determined by α , β , γ A11019

S D Kwei determined by β , δ , ϵ , &c Andromeda, and stars in Pisces

Tae Wei Yuan, space between stars in Leo and Virgo

Tae Wei Yuan, circle of perpetual opposition

Yew She To, η , ν , τ Bootis Toon Teon, σ , τ Virginis Tao Tsoo, α Leonis
Hing Chin, star in Coena Berenices Tung Kwan, 2567 Leonis

Tean Tsawng, ν , θ , κ Bootis

Pih Tow, the seven bright stars in Ursa Major

San Kung, the three stars in the head of Arcturus

Tae Yang, χ Ursa Majoris

Tean IIwang Ta Ta, Polaris Star To IIwang, β Ursa Minoris

Kwei in Pih Tow, the square in Ursa Major

Shoo Tsoo, λ 3233 Ursa Minoris How Kung, b 3167 Ursa Minoris

Kow Chin, ζ Ursa Minoris Tean Choo, α Ursa Majoris

San Tsoo, ϕ , σ , &c Ursa Majoris

Tean Laou, ω and small stars in Ursa Major

Chung Tae, λ , μ , Shang Tae, ι , κ Ursa Majoris

Wan Chang, θ , ν , ϕ Ursa Majoris

Shang Wei, star in Camelopardalis, also one in Cepheus

Ko Teau, ν , ξ , α , π Cassiopeia

Toon Ho, ϵ , b , α , ζ Arietis Toon Yin, δ , ζ Arietis

Wao Ping, α , δ , ι , &c in Pisces Toon Yuen, stars in Cetus

In the reign of Heaven Tsung, the 3rd year of the epoch Hung Cho, the 11th moon, day Woo Souh, a comet was seen in the south of Toon Tsan. Its tail pointed to the north east. It passed over the star Jin. It passed through Choo Kow. In the 12th moon, day Woo Shin, being the 1st day of the moon, it entered Ying Shuh. On the day Kang Shin it passed into Tean Tsang.

Emperor Heaven Tsung and epoch Hung Cho, 1488-1505, 31st year, 1490 12th moon, day Woo Souh, December 31 days, Woo Shin, 1491, January 10 Kang Shin, January 22

There appears to be an error in the original in the moon. The Supplement to 'M T L' has the 12th moon instead of the 11th, which seems to be correct. Pingüd, after Gengul, has the 12th moon, and Biot's computations agree with that moon, but are not consistent with the 11th moon. The 12th moon has, therefore, been employed instead of the 11th in the preceding computations of the dates.

Toon Tsan, α , β , γ , δ and others in Cygnus

Jin Sung, ϵ , ζ , η Pegasi

Ying Shih, or S D Shih, determined by α Pegasi and others

Teen Tsang, ι , η , θ , τ Oeti

320

A D 1500 May 8

In the 13th year of the same epoch, 4th moon, day Kee Woo, a comet was seen in Luy Poh Chin. It entered the space between S D Shih and Poh. It gradually lengthened, until it was about 3 cubits in length. It pointed toward Le Kung and swept Tsau Foo. It passed Tse Wei Yuen. It gradually lessened, and entering Tse Wei Yuen it approached near to Nou She. It passed through Shang Shoo. In the 6th moon, day Ting Yew, it disappeared.

Hung Che, 13th year, 1500 4th moon, day Kee Woo, May 8, 6th moon, day Ting Yew, July 10

S D Shih determined by α , β Pegasi, &c

S D Poh determined by γ Pegasi and α Andromedæ

Tse Wei Yuen, space between stars in Leo and Virgo

Tse Wei Yuen, circle of perpetual apparition

Luy Poh Chin, small stars in Aquarius and Pisces

Le Kung, three groups of two stars each in S D Shih (Pegasus)

Tsau Foo, δ , ϵ , ζ Cephei

Nou She, ψ Draconis

Shang Shoo, A 3687 Draconis

321

A D 1506 July 31

In the 1st year of the Emperor Woo Tsung, the 1st year of the epoch Ching Th, 7th moon, day Ke Chow, a star was seen to the west, without the boundary of Tse Wei. It resembled a great ball. Its colour was a bluish white. After some days it had a small tail. It was seen between S D Tsan and Tsang. It gradually lengthened, and appeared like a comet, extending in a north westerly direction towards Wan Chang.

Emperor Woo Tsung and epoch Ching Th, 1506-1521 1st year, 1506 7th moon, day Ko Chow, July 31

Tse Wei, circle of perpetual apparition

S D Tsan determined by α , β and others in Orion

S D Tsang determined by γ , ϵ , λ , μ and others in Gemini

Wan Chang, θ , ν , ϕ Ursa Majoris

322

A D 1506 August 10

On the day Kang Tse a comet was seen. It was bright, and went to the south-east. It was 3 cubits in length. After 3 days it lengthened to 5 cubits. It swept the upper star of Hea Tse, and entered Tae Wei Yuan.

1506 7th moon, day Kang Tse, August 10

Tae Wei Yuan, space between stars in Loo and Vingo

Hea Tse, ν, ξ Ursa Majoris

Possibly the same as the preceding

323

A D 1520 February

In the 15th year of the same epoch, 1st moon, a comet was seen

Ching Thih, 15th year, 1520 1st moon, February

324

A D 1523 July

In the reign of She Tsung, 2nd year of the epoch Ken Tsung, the 6th moon, there was a comet in Teen She.

Emperor She Tsung and epoch Ken Tsung, 1522-1566 2nd year, 1523 6th moon, July

Teen She, space within Serpens

325

A D 1531 August 5

In the 10th year of the same epoch, the intercalary 6th moon, day Yih She, a comet was seen in the east of S D Tung. Its length was about 1 cubit. It swept the first star in Heen Yuen. The tail gradually increased in length. It went on to H I) Yih. It was then about 7 cubits in length. It swept Teen Tsan to the north-east. It entered Tae Wei Yuan and swept Lang Wei. It passed through the degrees of H I) Kao, going to the south east. It swept the second star to the north of H I) Kung. It gradually lessened, and after 34 days it disappeared.

Ken Tsung, 10th year, 1531 intercalary 6th moon, day Yih She, August 5

S D Tung determined by γ, ε, λ, &c Commissum

Yih determined by α and others in Oietoi

Kang determined by ι, κ, χ, θ Virginis

Heen Yuen, α and other stars in Loo and Leo Minor

Teen Tsan, ψ Ursa Majoris Lang Wei, Comm. Boenrices

Tae Wei Yuan, space between stars in Loo and Vingo

326

A D 1532 September 2

In the 11th year of the same epoch, the 8th moon, day Ko Maou, a comet was seen in the east of S D Tung. It was about a cubit in length. It afterwards went to the north east. It passed through Teen Tsan. It gradually increased to about 10 cubits.

in length. It swept the star Choo in Tso Wei Yuan, and Toon Mun in S D Kee. In the 12th moon, day Koo Souh, after having been visible for 115 days, it disappeared.

Koa Tsung, 11th year, 1532 8th moon, day Ko Maou, September 2, day Koo Souh, December 26

S D Tsung determined by γ , ϵ , λ , μ , &c Geminorum

S D Kee determined by Spica and ξ Virginis

Tae Wei Yuan, space between stars in Loo and Virgo

Toon Tsin, α and other stars in Cygnus

Toon Mun, stars between Spica and γ Hydri

327

A.D. 1533 July 1

In the 12th year of the same epoch, 6th moon, day Sun Sie, a comet was seen in Woo Chay. Its length was 5 cubits. It swept Tso Lang and Toen Tu Tsang Kouen. It gradually increased to about 10 cubits. It swept Ko Taou and passed over Tang Shay. In the 8th moon, day Woo Souh, it disappeared.

Koa Tsung, 12th year, 1533 6th moon, day Jin So, July 1, 8th moon, day Woo Souh, September 16

Woo Chay, α , β , θ , ι Aurigae and β Tauri

Toen Tu Tsang Kouen, γ Andromeda, Triangulum, and stars near

Ko Taou, ν , ξ , α , π Cassiopeiae

Tang Shay, ω Cygni and stars near in Lacerta, &c

328

A.D. 1539 April 30.

In the 18th year of the same epoch, 4th moon, day Kang Souh, a comet was seen. It was about 3 cubits in length. It was bright, and pointed towards the south west. It swept the 8th star of Hoon Yuan. After 10 days it disappeared.

Koa Tsung, 18th year, 1539 4th moon, day Kang Souh, April 30

Hoon Yuan, α and other stars in Loo and Loo Minor

329

A.D. 1554 June 23

In the 33rd year of the same epoch, the 5th moon, day Kwei Hac, a comet was seen near Toen Kouen. It entered Wan Chang. It came near the star Shuh. It was visible for 27 days, and then disappeared.

Koa Tsung, 33rd year, 1554 5th moon, day Kwei Hac, June 23

Toen Kouen, δ Ursa Majoris

Wan Chang, θ , ν , ϕ Ursa Majoris

Shuh, α Scorpionis

330

A.D. 1556 March 1

In the 35th year of the same epoch, the 1st moon, day Kang Shin, a comet was seen near Tsin Hoon. It was more than a cubit in length. It pointed towards the

Comets observed in China

south west, and gradually increased in length to about 3 cubits. It swept Tae Wei Yuen, to the north east of Tae Seang. It entered Tae Wei Yuen and came near to Teen Chwang. On the 2nd day of the 4th moon it disappeared.

Kee Tung, 35th year, 1556 1st moon, day Kang Shin, March 1. The 2nd day of the 4th moon, about May 27

Tae Wei Yuen, circle of perpetual apparition

Tae Wei Yuen, space between Loo and Vingo

Tun Heen, ψ , χ and others in Vingo

Tae Seang, δ Vingmus

Teen Chwang, stars near θ Diaconis

331

A D 1557 October 10

In the 36th year of the same epoch, 9th moon, day Woo Shin, a comet was seen in Teen She Yuen, near Le Sse, to the north west. It remained until the 23rd year of the 10th moon, when it disappeared.

Kee Tung, 36th year, 1557 9th moon, day Woo Shin, October 10

Teen She Yuen, space bounded by Scorpions

Le Sse, λ Ophiuchi and small stars near

332

A D 1569 November 9

In the reign of Muh Tsung, the 3rd year of the epoch Lung King, the 10th moon, day Sun Chow, the 1st day of the moon, a comet was seen in Teen She Yuen. It pointed to the north east. On the day Kang Shin it disappeared.

Emperor Muh Tsung and epoch Lung King, 1567-1572 3rd year, 1569
10th moon, day Sun Chow, November 9, Kang Shin, November 28

Teen She Yuen, space bounded by Scorpions

333

A D 1577 November 14

In the reign of Shun Tsung, 5th year of the epoch Wan Le, 10th moon, day Won Tze, a comet was seen to the south-west. Its colour was a bluish white. Its length was estimated at 10 cubits. Its vapour (tail) was perfectly white. From the S I) Wei and Ke it passed over S D Tow and New. It approached near to S I) Nou. It was visible for 1 moon, and then disappeared.

Emperor Shun Tsung and epoch Wan Le, 1573-1619 5th year, 1577 10th moon, day Woo Tze, November 14

S D Wei determined by γ , δ , ϵ in Scorpio

Ke determined by γ , δ , ϵ , &c Sagittarii

Tow determined by ζ , r , σ , &c Sagittarii

New determined by α , β , &c Capricorni

Nou determined by ϵ , μ , &c Aquarii.

334

A D 1580 October 1

In the 8th year of the same epoch, 8th moon, day Kang Shin, a comet was seen in the south east. It increased in size a little every night. It passed along Ho Han. It was soon altogether for 70 days, and then disappeared.

Epoch Wan Le, 8th year, A D 1580 8th moon, day Kang Shin, October 1
Ho Han, the Milky Way

335

A D 1582 May 20

In the 10th year of the same epoch, the 4th moon, day Ping Shin, a comet was seen in the north-west. It resembled a folded piece of dyed silk. The tail pointed to Woo Chay. It was visible for about 20 days, and then disappeared.

Epoch Wan Le, 10th year, 1582 4th moon, day Ping Shin, May 20
Woo Chay, α , β , θ , ι Andromeda and β Tauri

336

A D 1585 October 3

In the 13th year of the same epoch, 9th moon, day Woo Tze, a comet appeared near Yu Lan. It was more than a cubit in length. Each night it went to the east. It gradually lessened, and in the 10th moon, day Kwoi Yin, it disappeared.

Wan Le, 13th year, 1585 9th moon, day Woo Tze, October 3, day Kwoi Yow, November 17
Yu Lan, δ , τ , a Aquarius

337

A D 1591 April 3

In the 19th year of the same epoch, the 3rd moon, day Ping Shin, there was a star like a broom in the north-west, about a cubit in length. It passed over S D Wei, Shih, and Peih. Its length was then 2 cubits. In the intercalary 3rd moon, on the day Ping Yin, the 1st day of the moon, it entered S D Lew.

Wan Le, 19th year, 1591 3rd moon, day Ping Shin, April 3, intercalary 3rd moon, day Ping Yin, April 13

S D Wei determined by a Aquarius, &c

Shih determined by α , β Pegasus and others near

Peih determined by γ Pegasi and a Andromedae

Lew determined by α , β , γ Aries

338

A D 1593 July 20

In the 21st year of the same epoch, 7th moon, day Yih Maou, a comet was seen in the eastern part of S D Tsing. On the day Yih Hsia it went the contrary way, entered Tze Wei Yuan, and approached closely to Hua Kao.

Wan Le, 21st year, 1593 7th moon, day Yih Maou, July 20, day Yih Hoo,
August 9

S D Tsung determined by γ , ϵ , λ , μ , &c Geminorum

Tsao Wei Yuan, circle of perpetual apparition

Hwa Kae, small stars in Cassiopeia and Camelopardalis (uncertain)

339

A.D. 1596 July 26

In the 24th year of the same epoch, 7th moon, day Ting Chow, a comet was seen in the north west. It resembled a round ball. It entered S D Yih. It was about a cubit in length. Its course was towards the north-west.

Wan Le, 24th year, 1596 7th moon, day Ting Chow, July 26

S D Yih determined by α and other stars in Crater

340

A.D. 1607 September 11

In the 35th year of the same epoch, the 8th moon, day Sun Yow, the 1st day of the moon, a comet was seen in the eastern part of S D Tsung. It pointed to the south-west. It went slowly to the north west. On the day Jin Woo it passed from S D Fang into S D Sun and disappeared.

Wan Le, 35th year, 1607 8th moon, day Sun Yow, September 11, day Jin Woo, October 2

S D Tsung determined by γ , ϵ and other stars in Gemini

Fang determined by β , δ and others in Scorpio

Sun determined by Antares and others in Scorpio

341

A.D. 1618 November 16

In the 46th year of the same epoch, 10th moon, day Yih Chow, a comet appeared in S D Te. Its length was about 10 cubits. It pointed to the south east. It gradually pointed to the north west. It swept over the star Tao Yang Shoo. It entered S D Kang, about a degree to the north-west. It swept Pih Tow, the stars Hsien and Ke, Wan Chang, and Woo Chay. It passed off Tao Wei Yuan. In the 11th moon, day Kee Shun, it disappeared.

Wan Le, 46th year, 1618 10th moon, day Yih Chow, November 16, day Kee Shun, December 25

S D Te determined by α , β , γ , &c Librae

S D Kang determined by ι , κ , λ , θ Virginis

Tsao Wei Yuan, circle of perpetual apparition

Tao Yang Shoo, χ Ursae Majoris

Pih Tow, the seven bright stars in Ursa Major

Seuen, β Ursae Majoris Ke, γ Ursae Majoris

Wan Chang, θ , v , ϕ Ursae Majoris

Woo Chay, α , β , θ , & ϕ Aurigae, and β Tauri.

342

A D 1619 February

In the 47th year of the same epoch, 1st moon, a comet was seen in the south-east. Its length was estimated at 100 cubits. Its luminous envelope pointed downwards; the end was curved and pointed.

Wan Lo, 47th year, 1619 1st moon, February

343

A D 1639

In the reign of Chwang Lo, 12th year of the epoch Tsung Ching, a comet was seen in the degrees of S D Tsan

Emperor Chwang Lo and epoch Tsung Ching, 1628-1644 12th year, 1639
S D Tsan determined by α , β , γ , δ , &c Orionis

344

A D 1640 December 12

In the 13th year of the same epoch, 10th moon, day Ping Seuh, a comet was seen Tsung Ching, 13th year, 1640 10th moon, day Ping Seuh, December 12

The Observations that follow form a separate section in the 'Sho Ko,' in which they are termed those of Temporary or Strange Stars. Some of these are undoubtedly meteors, and have consequently been omitted here, where there was any reason to believe them comets, or where there was anything particularly interesting relating to them they have been retained. They are all of the Ming dynasty

345

A D 1376 June 22

In the reign of Tao Tsoo, 9th year of the epoch Hung Woo, the 6th moon, day Woo Tsoo, there was a great star resembling a round ball. Its colour was white. It was situated in Tean Tsang. It crossed Woo Ping and Kuen Shoo. It entered Tao Wei Yuan. It swept Wan Chang and pointed towards Nuy Shoo. It entered into S D Chang. In the 7th moon, day Yih Hoo, it disappeared.

Emperor Tao Tsoo and epoch Hung Woo, 1368-1398 9th year, 1376 6th moon, day Woo Tsoo, June 22, 7th moon, day Yih Hoo, August 8

S D Chang determined by κ , λ , μ , &c Hydrus

Tean Tsang, ι , θ , η , in Centaurus Kuen Shoo, ν Paser

Tao Wei Yuan, male of perpetual apparition

Wan Chang, θ , ϕ , ν Ursa Majoris

Tean Shoo, or Nuy Shoo, δ and other small stars in Draco

346

A D 1378 September 26

In the 11th year of the same epoch, 9th moon, day Kon Seuh, a star was seen to the north-east, in Woo Chay. It put forth a tail about 10 cubits in length. It passed

over Nuy Keae It entered Tze Wei Kung It swept the five stars of Pih Kuh It passed over Shaou Tsue of Tung Yuen It entered Teen She Yuen, and remained there until the 10th moon, day Ke Wei, when, on account of cloudy weather, it could no longer be seen

Hung Woo, 11th year, 1378 9th moon, day Koa Seuh, September 26, Ko Wei, November 10

Woo Chay, α , β , &c Amigso, and β Tauri

Nuy Keae, τ and others in Ursa Major

Tze Wei Kung, circle of perpetual apparition

Pih Kuh, Polaris, and others near

Shaou Tsue, η Draconis

Teen She Yuen, space bounded by Scorpions

347

A.D. 1385 October 23

In the 18th year of the same epoch, 9th moon, day Yin Yow, a comet was seen in Tze Wei Yuen It came very near to Yow Chih Fu, and passed out by Twan Mun On the day Yih Yow it entered S D Yih Its length was then about 10 cubits In the 10th moon, day Kang Yin, it entered Koem Mun, and swept Teem Monou

Hung Woo, 18th year, 1385 9th moon, day Woo Yin, October 23, Yih Yow, October 30 10th moon, day Kang Yin, November 4

S D Yih determined by α , β and others in Crater

Tze Wei Yuen, space between stars in Leo and Virgo

Yow Chih Fu, β Virginis

Twan Mun, space between β and γ Virginis

Koem Mun, stars in Hydrus, between Crater and Corvus

Teem Monou, probably stars in Aige Navis

348

A.D. 1388 March 29

In the 21st year of the same epoch, 2nd moon, day Ping Souh, a star appeared in the eastern part of S D Poih

Hung Woo, 1388 2nd moon, day Ping Yin, March 29

S D Poih determined by γ Pegasus and α Andromedae

349

A.D. 1430 September 9

In the reign of Seunon Tsung, the 5th year of epoch Seunon Thih, the 8th moon, day Kang Yin, a star was seen near Nan Ho It resembled a large round ball Its colour was a dark blue It was seen altogether for 26 days, and then disappeared

Imperial Seunon Tsung and epoch Seunon Thih, 1426-1435 5th year, 1430 8th moon, day Kang Yin, September 9

Nan Ho, α , β , &c Canis Minoris

350

A D 1430 November 14

In the 10th moon of the same year, day Ping Shin, an extraordinary star was seen to the south of Wao Ping. Its course was to the south east. It crossed Teon Tsang and Teon Yu. It was visible for 8 days, and then disappeared.

Souen Tih, 5th year, 1430 10th moon, day Ping Shin, November 14

Wao Ping, δ, ε, μ, ν Piscium

Teon Tsang, ν, θ, η in Cetus

Teon Yu, small stars below Cetus in Fornax

351

A D 1431 January 3

In the 12th moon of the same year, day Ting Hae, a star like a round ball was seen near Kow Yow. Its colour was a yellowish white. It was not bright. After 15 days it disappeared.

1430 12th moon, day Ting Hae 1431, January 3

Kow Yow, μ, ω, &c Eridani

352

A D 1453 January 4

In the reign of King Te, the 3rd year of the epoch King Tao, the 11th moon, day Kwei Wei, there was a star seen in S D Kwei, near Teoh She Ko. It went very slowly to the west.

King Te appears to have been a regent during the captivity of the Emperor Ying Tsung. His rule and epoch King Tao, 1450-1454 3rd year, 1452 11th moon, day Kwei Wei, 1453, January 3

S D Kwei determined by γ, δ, η, θ Cancer

Teoh She Ko, Praewopo in Cancer

353

A D 1458 December 24

In the reign of Ying Tsung, 2nd year of the epoch Teon Shun, 11th moon, day Kwei Maou, there was a star seen in S D Sing. Its colour was white. It went westward until the day Ping Woo, when its body faded away. Its appearance was like meal, or the refuse of silk. Its place was near Ilcen Yuan. On the day Kang Seuh it produced a tail $\frac{4}{5}$ ths of a cubit in length. It invaded the north west star of Kwan Wei. In the 12th moon, day Jin Souh, it disappeared in the eastern part of S D Tsung.

Emperor Ying Tsung and epoch Teon Shun, 1457-1464 2nd year, 1458 11th moon, day Kwei Maou, December 24, day Ping Woo, December 27, day Kang Seuh, December 31 12th moon, day Jin Seuh, January 12, 1459

S D Sing determined by σ, τ, &c Hydriæ

S D Tsung determined by γ, ε, λ, μ, &c Geminorum

Ilcen Yuan, α, γ and other stars in Loo and Loo Minor

Kwan Wei, λ, μ and other stars in Cancer

354

A D 1461 June 29

In the 5th year of the same epoch, 6th moon, day Jin Shin, a star resembling white meal was seen near Tsung Chung, in Teem She Yuem. On the day Yih Wei it changed into a white vapour and disappeared.

Teem Shun, 5th year, 1461 6th moon, day Jin Shin, Juno 29, day Yih Wei, August 2

Teem She Yuem, space bounded by Serpens
Tsung Chung, β , γ Ophiuchi

355

A D 1462 June 29

In the 6th year of the same epoch, 6th moon, day Ping Yin, a star was seen near the star Tsch. Its colour was a bluish white. It entered Tze Wei Yuem. It invaded Teem Laou. On the day Kwei Wei it was beneath Chung Tsch. Its form gradually faded away.

Teem Shun, 6th year, 1462 6th moon, day Ping Yin, Juno 29, Kwei Wei, July 16

Tze Wei Yuem, circle of perpetual apparition
Tsch, δ Cassiopeia
Teem Laou, ω and others in Ursa Major
Chung Tsch, λ , μ Ursa Majoris

356

A D 1491 January 19

In the reign of Hoou Tsung, 3rd year of epoch Hung Cho, 12th moon, day Ting See, a star was seen in Teem She Yuem. It went to the south-east. On the day Woo Shin it was seen beneath Teem Tsang. It gradually went towards S D Peh.

Emperor Hoou Tsung and epoch Hung Cho, 1488-1505 3rd year, 1490 12th moon, day Ting See, January 19, 1491, Woo Shin, January 30

Teem She Yuem, space bounded by Serpens
Teem Tsang, ι , η , θ , &c. Cast
S D Peh determined by γ Pegasi and α Andromedae

357

A D 1495 January 7

In the 7th year of the same epoch, 12th moon, day Ping Yin, a star was seen near Teem Keang. It went slowly towards S D Tow until the 8th year, 1st moon, day Kang Seuh, when it entered S D Wei.

Hung Cho, 7th year, 1494 12th moon, day Ping Yin, January 7, 1495 8th year, 1st moon, day Kang Seuh, 1495, February 20

S D Tow determined by ζ , τ , σ , &c Sagittarii
S D Wei determined by α Aquarii and θ , ι Pegasus
Teem Keang, θ and others in Ophiuchus

358

A D 1499 August 16

In the 12th year of the same epoch, 7th moon, day Woo Shin, a star was seen near the star Tsung in Tsoen Shoo Yuan. It entered the eastern boundary of Tsoe Wei Yuan. It passed Shaou Tsoo and Shang Shoo. It touched Tse Tze and How Kung. It passed out of the western boundary near Shaou Foo. It was visible until the 8th moon, day Ko Chow, when it disappeared.

Hung Cho, 12th year, 1499 7th moon, day Woo Shin, August 16, 8th moon, day Ko Chow, September 6

Tsoen Shoo Yuan, space bounded by Scorpis

Tsoe Wei Yuan, circle of perpetual apparition

Ts Tze, γ Ursae Minoris

How Kung, β Ursae Minoris

Shaou Foo, λ Draconis

359

A D 1502 November 28

In the 15th year of the same epoch, 10th moon, day Woo Shin, a star was seen near Tsoen Maou, in S D Chang. It arrived at S D Yih, and having returned again to Chung, on the day Woo Yin it disappeared.

Hung Cho, 15th year, 1502 10th moon, day Woo Shin, November 28, day Woo Yin, December 8

S D Chang determined by α, λ, μ, &c Hydrae

S D Yih determined by α and others in Cister

Tsoen Maou, stars in Aiga Navis

360

A D 1521 February 7

In the reign of Woo Tsung, the 16th year of the epoch Chung Tih, the 1st moon, day Kee Yin, the 1st day of the moon, there was a star in the south-east. It resembled a changing flame of fire, of a white colour, and was from 6 to 7 counts in length. It crossed the heavens from east to west, and was dissipated.

Emperor Woo Tsung and epoch Chung Tih, 1506-1521 16th year, 1521 1st moon, day Kee Yin, February 7

361

A D 1529 February 5

In the reign of Shoo Tsung, 8th year of the epoch Kee Tsung, the 1st moon, on the day of Leih Chun, a long star extended across the heavens. The same occurred in the 7th moon.

Emperor Shoo Tsung and Kee Tsung, 1522-1566 8th year, 1529 1st moon, day of Leih Chun. Leih Chun is the 3rd of the 24 divisions of the year, being that of the beginning of spring. It answers to our February 5 7th moon, August

362

A D 1532 March 9

In the 11th year of the same epoch, the 2nd moon, day Jin Woo, a star was seen in the south east. Its colour was a bluish white. It had a tail. After 19 days it disappeared.

Kee Tsung, 11th year, 1532 and moon, day Jin Woo, March 9

363

A D 1534 June 12

In the 13th year of the same epoch, 5th moon, day Ting Maou, the 1st day of the moon, a star was seen in Tung Shay. It passed through Toon Ko and entered Ko Taou. On the 24th day it disappeared.

Kee Tsung, 13th year, 1534 5th moon, day Ting Maou, June 12

Tang Shay, stars in Cygnus, Lacerta, and Andromeda

Teen Ke, θ, ρ, σ and others in Andromeda

Ko Taou, ν, ξ, ο and others in Cassiopeia

364

A D 1536 March 24

In the 15th year of the same epoch, the 3rd moon, day Woo Woo, a star was seen near Teen Kee. It went to the east. It passed through Toon Choo to the west. It entered Teen Han, and in the 4th moon, day Jin Shin, it disappeared.

Kee Tsung, 15th year, 1536 3rd moon, day Woo Woo, March 24, 4th moon, day Jin Shin, April 27

Teen Kee, β, γ and others in Draco

Teen Choo, δ and others in Draco

Teen Han, the Milky Way

365

A D 1545 December 26

In the 24th year of the same epoch, the 11th moon, day Jin Woo, a star appeared in Teen Kee. It entered S D Ke. It turned and went to the north-east. At the end of the moon it disappeared.

Kee Tsung, 24th year, 1545 11th moon, day Jin Woo, December 26

S D Ke determined by γ, δ, ε Sagittarii

Toon Kee, β, γ, etc in Draco

366

A D 1578 February 22

In the reign of Shin Tsung, 6th year of epoch Wan Le, 1st moon, day Woo Shin, a great star resembling the Sun appeared in the west, surrounded by a number of stars, all in the west.

Emperor Shin Tsung and epoch Wan Le, 1573-1617 6th year, 1578 1st moon, day Woo Shin, February 22

367

A D 1584 July 1

In the 12th year of the same epoch, 6th moon, day Ke Yew, a star appeared in S D Fang

Wan Lo, 12th year, 6th moon, day Ke Yew, July 1, 1584
S D Fang determined by β , δ , π , ρ in Scorpio

368

A D 1604 September 30

In the 32nd year of the same epoch, the 9th moon, day Yih Chow, a star was seen in the degrees of S D Wei. It resembled a round ball. Its colour was a reddish yellow. It was seen in the south west until the 10th moon, when it was no longer visible. In the 12th moon, day Sun Yew, it again appeared in the south east, in S D Wei. The next year, in the 2nd moon, it gradually faded away. In the 8th moon, day Ting Maou, it disappeared.

Wan Lo, 32nd year, 1604 9th moon, day Yih Chow, September 30, 10th moon, November, 12th moon, day Sun Yew, 1605, January 14 33rd year, 1605 2nd moon, day Ting Maou, March 21

S D Wei determined by ϵ , μ , ν and others in Scorpio

Biot has S D Fang instead of the second S D Wei. S D Fang is determined by β , δ , π and others in Scorpio. It is, however, Wei in the 'Sho Ke'

369

A D 1609

In the 37th year of the same epoch a great star was seen in the south west. The tail had four rays.

Wan Lo, 37th year, 1609

370

A D 1618 November 24

In the 46th year of the same epoch, the 9th moon, day Yih Maou, a white vapour was seen in the south east. It was about a cubit in width and 20 cubits in length. It extended from the east to the west of S D Chin. It entered S. D Yih, and after 19 days it disappeared.

S D Chih determined by β , &c Corvi
Yih, α and others in Crater

371

A D 1618 December 5

In the 11th moon of the same year, day Ping Yin, in the morning, a star like a white flower was seen.

1618 11th moon, day Ping Yin, December 5

172

A D 1621 May 12

In the reign of He Tsung, the 1st year of the epoch Tseen Ke, the 4th moon, day Kwei Yew, a reddish star was seen in the east

Emperor He Tsung and epoch Tseen Ke, 1621-1627 1st year, 1621 4th moon, day Kwei Yew, May 12

APPENDIX,

CONSISTING OF

T A B L E S

TO

REDUCING CHINESE TIME TO EUROPEAN RECKONING,

AND

A CHINESE CELESTIAL ATLAS

Chinese Chronological Tables;

SHOWING

THE SUCCESSION OF THE DYNASTIES AND EMPERORS,

FROM THE EARLIEST PERIOD TO THE PRESENT TIME

* * * These Tables are required for finding the Year of any occurrence. The method of using these and the subsequent Tables is fully explained in the Introductory Remarks.

SUCCESSION OF THE DYNASTIES,

*FROM THE ACCESSION OF THE HUA TO THAT OF THE PRESENT DYNASTY,
THE T'ING*

Dynasties		Date	Dynasties		Date
東周	Hua	B.C. 2205	後漢	Chin	A.D. 557
	Shang	1766		隋	589
	Chow	1122		Tang	618
	Tung Chow	696		Liang	907
	Tsin	255		Tang	913
	Han	206		Wen	936
	Tung Han	A.D. 25		Wen	947
	Shuh Han	221		Wen	951
	Tsin	265		Sung	960
	Tung Tsin	317		Yuen	1280
東屬	Sung	420		Ming	1368
	Tso	479		Tang	1644
	Leung	502			

Chinese Chronology may be arranged under Three Divisions—the Fabulous Period, the Uncertain Period, and that which they consider as certain.

THE FABULOUS PERIOD

Emperor's Name	Reigned Years
盤古 Pwan Koo	The First Man
天皇氏 Toen Hwang Sho	18,000
地皇氏 Te Hwang Sho	18,000
人皇氏 Jin Hwang Sho	45,000

THE UNCERTAIN PERIOD

三皇 SAN HWANG THE THREE HWANGS

Emperor's Name	Date	Reigned Years
伏羲 Fu Hsia	3328	115
神農 Shin Nung	3213	140
帝嚳 Te Lan	2073	80
帝承 To Ching	2993	60
帝明 To Ming	2933	49
帝宜 Te E	2884	45
帝來 Te Lao	2839	48
帝真 Te Lo	2791	49
帝榆 To Yu	2748	50
皇帝 Hwang To	2698	101

The three Hwangs are Fu Hsia, Shin Nung, and Hwang To.

From the 1st year of the 1st epoch, 2637 B.C., being the 60th year of Hwang To, the Chronology is considered as certain.

五帝 Woo Te The Five Te's
 (THE WORDS HWANG AND TE ARE IMPERIAL TITLES)

Emperors Name		Date	Ruled Years
少昊	Shaou Hsiaou	30597	84
顓頊	Chuen Kuh	2513	78
帝嚳	Te Kwuh	2435	79
帝堯	Te Yaou	2356	101
帝舜	To Shun	2255	50

夏朝 Hua Chaoou The Hua Dynasty, B.C. 2205-1765

大禹	Ta Yu	2205	8
帝啟	Te Ke	2197	9
太康	Tao Kung	2188	19
仲康	Chung Kang	2159	19
王相	Wang Seang	2146	18
少康	Shaou Kang	2118	61
王杼	Wang Choo	2057	17
王槐	Wang Huwe	2040	26
王芒	Wang Mang	2014	18
王泄	Wang See	1996	16
王不降	Wang Puh Keang	1980	59
王脣	Wang Shang	1931	21
王庸	Wang Kun	1900	21
王孔甲	Wang Kung Kee	1879	31
王扈	Wang Kaou	1848	11
王發	Wang Fa	1837	19
桀癸	Kee Kwei	1818	53

商朝 SHIANG CHIAOU

THE SHIANG DYNASTY, B.C. 1766-1122

Emperor's Name	Date	Reigned Years
成湯 Chung Tung	B.C. 1766	13
太甲 Tao Koa	1753	33
沃丁 Yuh Ting	1720	29
太戊 Tao Kang	1691	25
小乙 Sonou Koa	1666	17
雍辛 Yung Ko	1649	12
太仲 Tao Woo	1637	75
仲壬 Chung Tung	1562	13
外丙 Wan Jin	1549	15
河祖 Ho Tan Koa	1534	9
祖乙 Tao Yih	1525	19
祖辛 Tao Sin	1506	17
沃祖 Yuh Koa	1490	29
祖甲 Tao Tung	1465	32
南庚 Nan Kang	1433	25
祖辛 Yang Koa	1408	
祖甲 Pwan Kang	1401	28
祖乙 Seacu Sin	1373	21
祖丁 Seacu Yih	1352	28
武祖 Woo Tung	1324	59
祖丁 Tao Kang	1265	7
祖辛 Tao Koa	1258	33
祖庚 Lan Sin	1225	6
祖丁 Kang Ting	1219	21

Emperors Name		Date	Reigned Years
武乙	Woo Yih	1198	1
太丁	Tao Ting	1194	3
帝乙	Ti Yih	1191	17
紂辛	Chou Sin	1154	32

周朝 Chow Chiaou

The Chow Dynasty, B.C. 1122-254 868 YEARS

武王	Woo Wang	1122	7
成王	Chung Wang	1115	37
康王	Kang Wang	1078	26
昭王	Chao Wang	1053	51
穆王	Mu Wang	1001	55
共王	Kung Wang	946	12
懿王	E Wang	931	25
孝王	Hsiao Wang	909	15
夷王	Ie Wang	894	16
厲王	Le Wang	878	51
宣王	Ssuon Wang	827	46
幽王	Yow Wang	781	11
平王	Ping Wang	770	51
桓王	Huan Wang	719	23

東周 Tung Chow

莊王	Chwang Wang	696	15
釐王	Le Wang	681	5

Chinese Chronological Tables

Emperor's Name		Date	Reigned Years
惠	Wuy Wang	80 676	25
襄	Senng Wang	651	33
頃	King Wanu	618	6
匡	Kwang Wang	612	6
定	Tung Wang	606	21
簡	Koon Wang	585	14
靈	Lang Wang	571	27
景	Kung Wang	544	35
敬	Kung Wang	519	41
元	Yuen Wang	475	7
貞	Ching Ting Wang	468	18
定	Kaon Wang	140	15
考	Wei Loß Wang	425	24
威	Gan Wang	401	36
烈	Loß Wang	375	7
安	Hoen Wang	368	48
烈	Shin Tung Wang	320	6
顯	Nan Wang	314	59
憲	Tung Chow Wang	255	7
胡			

秦朝 TSIN CHAOU THE TSIN DYNASTY, B.C. 225-205

昭襄王	Shiaou Seang Wang	255	5
孝文王	Haou Wan Wang	250	10
莊襄王	Chwang Senng Wang	240	4
始皇帝	Che Hwang Te	236	37
二世皇帝	Uih Sho Hwang Te	209	3

漢朝 HAN CHAO HAN DYNASTY, BC 206 to AD 264

西漢 SI HAN WESTERN HAN

Imperial Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
				BC	AD	BC
高帝	Kien Te				12	206 to 195
惠帝	Waiu Te				7	194 to 188
高后	Kiou Hou				8	187 to 180
文帝	Wan Te	None for 16 yrs	後元	179 to 164		
		How Yuan, { 1st epoch}	元	163 157	23	179 to 157
景帝	King Te	None for 7 yrs	中元	156 150		
			元	Chung Yuen	149 144	
武帝	Woo Te	None for 7 yrs	後元	How Yuan	143 141	16
			元	Kien Yuan	140 135	156 to 131
		元	光元	Yuen Kwang	131 129	
		元	朔元	Yuen Shu	128 123	
		元	豹元	Yuen Shou	122 117	
		元	鼎元	Yuen Ting	116 111	
		元	封元	Yuen Fung	110 105	
		太初	太元	Tao Choo	104 101	
		漢始	天元	Tao Hien	100 97	
		始	太元	Tao Chi	96 93	
昭帝	Chao Te	和元	元	Chung Po	92 89	
		後元	元	How Yuan	88 87	110 to 87
		始元	元	Cho Yuan	86 81	
		元	鳳元	Yuen Fung	80 75	
		平元	元	Yuen Peng	74	
宣帝	Huan Te	本始	本	Pun Cho	73 to 70	19

Emperor's Name		I poeh		Duration of I poeh	Reigned Years	Duration of Reign
元帝	Yuen Te	地	節	To Tsao	69 to 66	
		元	康	Yuen Kang	65 61	
		神	爵	Shm Taoß	61 58	
		五	鳳	Woo Fung	57 54	
		廿	露	Kan Loo	53 50	
		黃	龍	Hwang Lung	49	25
		初	元	Choo Yum	48 44	73 to 49
		永	光	Yung Kwang	43 39	
		建	昭	Koen Chnou	38 34	
		寬	寧	King Ning	33	16
成帝	Ching Te	建	始	Koen Cho	32 29	48 33
		河	平	Hoo Ping	28 25	
		陽	朔	Yang So	24 21	
		鴻	嘉	Hwang Kee	20 17	
		承	始	Yung Cho	16 13	
		元	建	Yuen Yen	12 9	
		般	和	Hwan Wo	8 7	26
		建	平	Koen Ping	6 3	32 7
		元	壽	Yuen Show	4 1	6
		元	始	Yuen Cho	1 D 5	1 D 5
哀帝	Gao Te	居	攝	Ken Cho	6 7	
		初	始	Choo Cho	8	3
		延	建	Keen Kwo	9 13	
		天	國	Tseen Fung	11 19	
		地	鳳	To Hwang	10 22	14
平帝	Ping Te					9 32
孺子嬰	Joo Ieo Ying					
王莽	Wang Mang (Usurper)					
淮陽	Hwang Yang					
				23 to 24	2	23 to 24

東漢 TUNG HANG EASTERN HAN

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
光武	Kwang Woo	建武	Koon Woo	A.D. 25 to 55		A.D.
明帝	Ming To	中元	Chung Yuon	56 57	33	56 to 57
章帝	Chang To	永平	Yung Ping	58 75	18	58 75
		建初	Koon Choo	76 83		
		元和	Yuan Ho	84 86		
		和	Chang Ho	87 88	1	76 88
和帝	Ho To	元	Yung Yuen	89 104		
		永	Yuen Jing	105		
殇帝	Shang To	元興	Yen Ping	106	1	106
安帝	Gan To	平	Yung Choo	107 113		
		初	Yuen Choo	114 119		
		寧	Yung Nung	120		
		光	Koon Kwang	121		
		建	Yen Kwang	122 125	19	107 125
順帝	Shun To	顯	Yung Keem	126 131		
		永	Yang Kon	132 135		
		陽	Yung Ho	136 141		
		永	Pan Gau	142 143		
		漢	Koon Kung	144	19	126 to 144
冲帝	Chung To	建	Yung Kon	145	1	145
質帝	Chih Te	永	Pun Choo	146	1	146
桓帝	Hwan To	木	Koon Ho	147 149		
		建	Ho Ping	150		
		和	Yuen Kee	151 152		
		平	Yung Hing	153 to 154		

Emperor's Name		Epoch		Duration of Epoch		Reigned Years	Duration of Reign	
靈帝	Lang Te	永	靈	Yung Show	155 to 157			
		延	熹	Yen He	158 166			
		永	康	Yung Kang	167	31	147 to 167	
		建	寧	Koen Ning	168 171			
		永	平	Illo Ping	172 177			
		建	平	Kwang Illo	178 183			
		光	和	Chung Ping	184 189	22	168 189	
		中	平	Choo Ping	190 193			
		初	平	Hing Ping	194 195			
		興	平	Koen Gan	196 220	31	190	220
獻帝		建	安					

後漢 HOW HAN THE LATER HAN

昭烈帝	Chao Lo Te	章	武	Chang Woo	221	222	2	221	242
後帝	How Te	建	興	Koen Hung	223	237			
		延	熙	Yen He	238	257			
		景	肅	King Teih	258	262			
		炎	興	Yen Hing	263	264	42	223	264

晉朝 TSIN CHAO THE TSIN DYNASTY, A.D. 265-419

西晉 SE TSIN WESTERN TSIN

武帝	Woo Te	泰	始	Tae Cho	265	274			
		咸	寧	Han Ning	275	279			
		太	康	Tae Kang	280	289	15	265 to 289	
		永	熙	Yung He	290				
		元	康	Yuen Kang	291 to 299				
		永	康	Yung Kang	300				

Imperial Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign	
懷帝 愍帝	Hwao To Min Te	永	寧	Yung Ning	AD 301		
		大	安	Tao An	301 to 303		
		永	興	Yung Hing	304 305		
		光	熙	Kwang Ho	306	17	290 to 306
		永	嘉	Yung Koa	307 312	6	307 312
		建	興	Koon Hing	313 316	4	313 316

東晉 TUNG TSJN EASTERN TSIN

元帝	Yuen To	祖武	武	Koon Woo	317		
		大	興	Tu Hing	318 321		
明帝	Ming To	永	昌	Yung Chang	322	6	317 322
成帝	Ching To	太	寧	Tao Ning	323 325	3	323 325
康帝	Kang To	咸	和	Han Wo	326 334		
穆帝	Muh To	康	康	Han Kang	335 342	17	326 342
哀帝	Gae To	建	元	Koon Yuen	343 341	2	343 341
帝	To Yih	永	和	Yung Ho	345 356		
簡文帝	Koon Wan To	升	寧	Shung Ping	357 361	17	345 361
孝武帝	Hsiaou Woo To	隆	興	Lung Ho	362		
安帝	Gan To	太	寧	Hung Ning	363 365	4	362 365
		咸	康	Tao Ho	366 370	5	366 370
		寧	元	Han Gan	371 372	2	371 372
		太	安	Ning Kang	373 375		
		隆	興	Tao Yuen	376 396	24	373 396
		元	安	Lung Gau	397 401		
		義	興	Yuen Hing	402 404		
恭帝	Kung To	元	熙	E He	405 to 418	22	397 to 418
		義	熙	Yuen Ho	419	1	419

宋朝 SUNG CHAOU THE SUNG DYNASTY, A.D. 420-478

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
武帝	Woo Te	永初	Yung Choo	420 to 422	3	420 to 422
少帝	Shou Te	景平	King Ping	423	1	423
文帝	Wan Te	元嘉	Yuen Kaa	424 to 453	30	424 to 453
孝武帝	Hsien Woo Te	孝建	Hsien Koon	454 to 456		
		大明	Ta Ming	457 to 464	8	457 to 464
廢帝	Pai Te	景和	King Ho	465	1 year	465
明帝	Ming Te	泰始	Tae Cho	465 to 471		
		泰豫	Tae Yu	472	8	465 to 472
荅梧王	Fang Woo Wang	元徽	Yuen Hwui	473 to 476	4	473 to 476
順帝	Shun Te	昇明	Shung Ming	477 to 478	2	477 to 478

齊朝 TSE CHAOU THE TSE DYNASTY, A.D. 479-501

高帝	Kao Te	建元	Koen Yuen	479	482	4	479	482
武帝	Woo Te	永明	Yung Ming	483	493	11	483	493
明帝	Ming Te	建武	Koen Woo	494	497	3	494	
		永泰	Yung Tae	498			498	
東昏後	Tung Hwan Hwo	永元	Yung Yuan	499	500	1	499 to 500	
和帝	Ho Te	中興	Chung Hing	501		1	501	

梁朝 LIANG CHAOU THE LIANG DYNASTY, A.D. 502-556

武帝	Woo Te	天監	Toen Koon	502	519		
		普通	Tsun Tung	520	526		
		大通	Ta Tung	526	537		
		中大通	Chung Ta Tung	528 to 534			

Emperors' Names		Epoch		Duration of Epoch		Reigned Years	Duration of Reign
		大同	Ta Tung	535	to 545		A.D.
簡文帝	Koon Wan To	中大同	Chung Ta Tung	546			
元帝	Yuen To	太清	Tae Tsing	547	549	47	502 to 549
敬帝	King To	大寶	Ta Paou	550	551	2	550 551
		承聖	Ching Shing	552	554	3	552 554
		招泰	Shao Tai	555			
		太平	Tae Ping	556		2	555 556

陳朝 CHIN CHAO THE CHIN DYNASTY, A.D. 557-588

武帝	Woo Te	永定	Yung Tung	557	559	3	557	559
文帝	Wan To	天嘉	Tien Kaa	560	563			
		天康	Tien Kang	566		7	560	566
伯宗	Pih Tsung	光大	Kwang Ta	567	568			
宣帝	Scouon To	大建	Ta Koon	569	581	14	569	581
後王	Hou Wang	至德	Chi Tih	583	586			
		頤明	Chung Ming	587	588	6	583	588

隋朝 SUY CHAO THE SUY DYNASTY, A.D. 589-617

文帝	Woo Te	開皇	Kao Hwang	589	600			
煬帝	Yang To	仁壽	Jin Show	601	604	4	589	604
恭帝	Kung To	大業	Ta Yee	605	to 616	13	605	616
		義寧	E Ning	617		1	617	

唐朝 TANG CHAO THE TANG DYNASTY, A.D. 618-906

Emperor's Name		Epoch	Duration of Epoch		Reigned Years	Duration of Reign		
高祖	Kaou Tsoo	武德	Woo Tih	A.D. 618 to 626		9	618 to 626	
太宗	Tao Tsung	貞觀	Ching Kwan	627	649	23	627	649
高	Kaou Tsung	永徽	Yung Hwuy	650	655			
		顯慶	Hien King	656	660			
		龍朔	Lung So	661	663			
		麟趾	Lun Tih	664	665			
		乾封	Keen Fung	666	667			
		總章	Tsung Chung	668	669			
		咸亨	Han Hwng	670	673			
		上元	Shang Yuan	674	675			
		儀開	E Fung	676	678			
		開元	Kao Toh	679				
		露	Yung Lung	680				
		隆耀	Kao Tih	681				
		淳道	Yung Shun	682				
		宏道	Hung Taon	683		3+	650	683
		嗣	Ero Shing	684	704			
		神龍	Shun Lung	705	706			
		景龍	Kung Lung	707	709	26	684	709
		雲極	Kung Yun	710	711			
		太極	Tae Kah	714		3	710	712
		開元寶	Kao Yuen	719	741			
		天寶	Teen Paou	742	755	43	713 to 755	
		至德	Che Tih	756 to 757				

* When this mark | occurs, it must be considered as representing the preceding Chinese character.

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
代宗	Tao Tsung	乾元	Kan Yuan	A.D. 758 to 759		
		上元	Shang Yuan	760 761		
		寶應	Paou Ying	762	7	756 to 762
		廣德	Kwang Thih	763 764		
		永泰	Yung Tae	765		
		大歷	Tu Leih	766 779	17	763 779
		建中	Koon Chung	780 783		
德宗	Tih Tsung	元和	Hsing Yuan	784		
		貞元	Chung Yuan	785 804	26	780 804
		永和	Yung Chung	805	1	805
		元慶	Yuen Ho	806 820	15	806 820
		長慶	Chang King	821 824	1	821 824
		寶歷	Paou Leih	825 826	2	825 826
		太和	Tao Ho	827 835		
		開成	Kao Ching	836 840	14	827 840
順宗	Woo Tsung	會昌	Hsuey Chang	841 846	6	841 846
		大中	Tu Chung	847 859	13	847 859
		咸通	Han Tung	860 873	14	860 873
		乾符	Kan Foo	874 879		
		廣明	Kwang Ming	880		
		中和	Chung Ho	881 884		
		光啟	Kwang Ko	885 887		
		文德	Wan Tih	888		
		龍紀	Lung Ke	889		
		順福	Tu Shun	890 891		
昭宗	Chao Tsung	景祐	King Fuh	892 to 893	15	874 to 888

Chinese Chronological Tables

Emperor's Name	Epoch		Duration of Epoch	Reigned Years	Duration of Reign	
					A.D.	A.D.
昭宣帝 Chaou Ssuem Te	乾寧	Kan Ning	894 to 897			
	光化	Kwang Hwa	898 900			
	天復	Toon Fuh	901 903			
	天祐	Toon Yew	904	16	889 to 904	
	天祐	Toon Yow	905 906	2	905 906	

五代朝 WOO TAH CHAOU, OR THE FIVE SHORT DYNASTIES, A.D. 907-960

後梁 HOW LEANG THE LATER LIANG, A.D. 907-923

太祖	Tae Tsoo	開平	Kao Ping	907 910			
末帝	Muh Te	乾化	Kan Hwa	911 912	6	907 912	
		乾化	Kan Hwa	913 914			
		貞明	Chung Ming	915 920			
		龍德	Lung Teh	921 922	10	913 922	

後唐 HOW TANG THE LATER TANG, A.D. 923-935

莊宗	Chwang Tsung	同光	Tung Kwang	923 925	3	923 925	
明宗	Ming Tsung	天成	Teon Ching	926 929			
懿帝	Mu Te	長興	Chang Hsing	930 933	8	926 933	
廢帝	Fei Te	應順	Ying Shun	934	3 months		
		清泰	Taung Tao	934 935	2	934 935	

後晉 HOW TSIN THE LATER TSIN, A.D. 936-946

高祖	Kaou Tsoo	天福	Teen Fuh	936 941	7	936 941	
出帝	Chuh Te	天福	Teen Fuh	943 944			
		開運	Kao Yun	945 to 946	4	943 to 946	

後漢 HOW HAN, 947-950

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
高祖	Kao Tsoo	天福	Tsoen Fuh	A.D. 947	1	A.D. 947
隱帝	Yen Te	乾祐	Kan Yew	948 to 950	3	948 to 950
後周 HOW CHOW, 951-960						
太祖	Tae Tsoo	廣順	Kwang Shun	951 953	3	951 953
世宗	She Tsung	顯德	Hsien Tih	954 959	6	954 959
恭帝	Kung Te				4	960

宋朝 SUNG CHIAOU (SECOND) SUNG DYNASTY, A.D. 960-1279

太祖	Tao Tsoo	建隆	Koen Lung	960	962		
		乾德	Kan Th	963	967		
		開寶	Kao Paou	968	975	16	960 975
		太平興國	Tao Ping Hsing Kwo	976	989		
		雍熙	Yung Il	984	987		
		端拱	Twan Kung	988	989		
		淳化	Shun Hwa	990	994		
		至道	Che Taou	995	997	22	976 997
		咸平	Han Ping	998	1003		
		景德	King Th	1004	1007		
真宗	Ching Tsung	大中祥符	Ta Chung Tseang Foo	1008	1016		
		天禧	Tsoen Il	1017	1031		
		乾興	Kan Hsing	1032		25	998 to 1032
		天聖	Tsoen Shing	1033	1031		
		明道	Ming Taou	1034 to 1033			
仁宗	Jin Tsung						

Emperor's Name		Epoch		Duration of Epoch	Roughed Years	Duration of Reign
英宗	Ying Tsung	祐	King Yow	A.D. 1034 to 1037		A.D.
神		寶	Paou Yow	1038 1039		
		元	Kang Ting	1040		
		定	King Lou	1041 1048		
		歷	Hwung Yow	1049 1053		
		祐	Ché Ho	1054 1055		
		至	Koa Yow	1056 1063	41	1053 to 1063
		嘉	Cho Ping	1064 1067	4	1064 1067
		平	Ho Ning	1068 1077		
		寧	Yuen Lung	1078 1085	18	1068 1085
		豐	Yuen Yow	1086 1093		
		祐	Shaou Shing	1094 1097		
		繼	Yuen Foo	1098 1100	15	1086 1100
		符	Keon Chang Tsing Kwo	1101		
		國	Tsing Ning	1102 1106		
		建	Ta Kwan	1107 1110		
		寧	Chung Ho	1111 1117		
		大	Chung Ho	1118		
		觀	E Ho	1119 1125	25	1101 1125
		和	Tsing Kang	1126	1	1126
		政	Keon Yen	1127 1130		
		重	Shaou Hsing	1131 1162	36	1127 1162
		宜	Sung Hsing	1163 1164		
		靖	Kan Taou	1165 1173		
		建	Shun Ho	1174 1189	27	1163 1189
		紹	Shaou Ho	1190 to 1194	5	1190 to 1194
		熙				
		熙				

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
寧宗 理	Ning Tsung	慶元	King Yuen	A.D. 1195 to 1200		
		嘉泰	Kou Tae	1201 1207		
		開禧	Kae He	1205 1207		
		嘉定	Kao Ting	1208 1224	30	1195 to 1224
		寶祐	Paou King	1225 1227		
		紹定	Shaou Ting	1228 1233		
		端平	Twan Ping	1234 1236		
		嘉祐	Kao Ho	1237 1240		
		淳祐	Shun Yew	1241 1252		
		寶祐	Paou Yow	1253 1258		
度 恭 端 帝 曄	Too Tsung	開慶	Kao King	1259		
	Kung Tsung	定咸	King Timg	1260 1264	40	1225 1264
	Twan Tsung	淳德	Han Shun	1265 1274	10	1265 1274
	Te Ping	祐景	Tih Yow	1275	1	1275
		炎	King Yen	1276 1277	2	1276 1277
		祥興	Tseang Ning	1278 1279	2	1278 1279

元朝 YUEN CHAOU THE YUEN DYNASTY, A.D. 1280-1367

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
世祖 成宗 武仁 英	Sho Tsao	至元	Cho Yuen	1280 1294	15	1280 1294
	Chung Tsung	元貞	Yuen Ching	1295 1296		
		大德	Ta Teh	1297 1307	10	1295 1307
		至大	Cho Ta	1308 1311	4	1308 1311
		皇慶	Hwang Kung	1312 1313		
		應祐	Yen Yow	1314 1320	9	1312 1320
		至治	Cho Cho	1321 to 1323	3	1321 to 1323

Emperor's Name	Epoch			Duration of Epoch	Reigned Years	Duration of Reign
泰定帝	Tae Ting To	泰定	Tae Ting	A.D. 1324 to 1327		A.D.
明宗	Ming Tsung	至和	Cho Ho	1328	5	1324 to 1328
文	Wan Tsung	天歷	Tean Leah	1328	6	
寧	Ning Tsung	天歷	Tean Leah	1328 1329		
順帝	Shun To	至順	Cho Shun	1330 1332	5	1328 1332
		"		1332	1 mo	1332
		元統	Yuan Tung	1333 1334		
		至元	Cho Yuan	1335 1340		
		至正	Cho Ching	1341 1367	25	1333 1367

明朝 MING CHAOU THE MING DYNASTY, A.D. 1368-1644

太祖	Tae Tsoo	洪武	Hung Woo	1368 1398	31	1368 1398
惠帝	Hwuy Te	建文	Koon Wan	1399 1402	4	1399 1402
成祖	Chung Tsoo	永樂	Yung Lo	1403 1424	22	1403 1424
仁宗	Jin Tsung	洪熙	Hung Ho	1425	1	1425
宣	Seuen Tsung	宣德	Souen Tih	1426 1435	10	1426 1435
英	Ying Tsung	正統	Ching Tung	1436 1449	14	1436 1449
景帝	King To	景泰	King Tae	1450 1456	7	1450 1456
英宗	Ymg Tsung	天順	Tean Shun	1457 1468	8	1457 1468
憲	Hoon Tsung	成化	Chung Hwa	1465 1487	23	1465 1487
孝	Honou Tsung	弘治	Hung Cho	1488 1505	18	1488 1505
武	Woo Tsung	正德	Ching Tih	1506 1521	16	1506 1521
世	She Tsung	嘉靖	Koa Tung	1522 1566	45	1522 1566
穆	Muh Tsung	隆慶	Lung King	1567 1573	6	1567 1573
神	Shun Tsung	萬曆	Wan Leah	1573 to 1619	47	1573 to 1619

* Ymg Tsung was taken prisoner by the Tartars in 1450, and restored in 1457, when he changed the epoch to Tean Shun.

Emperor's Name		Epoch		Duration of Epoch	Ruled Years	Duration of Reign
光宗	Kwang Tsung	泰昌	Tao Chang	A.D. 1620	1	A.D. 1620
熹宗	He Tsung	天啟	Toan Ke	1621 to 1627	7	1621 to 1627
莊烈	Chwang Lee	崇禎	Tsung Chang	1628 - 1644	17	1628 - 1644

清朝 TSING CHAO THE TSING DYNASTY, A.D. 1644

世祖	Sho Tsoo	順始	Shun Che	1644	1661	1644	1661
聖祖	Shin Tsoo	康熙	Kang Ho	1662	1722	1662	1722
世宗	Sho Tsung	雍正	Yung Ching	1723	1735	1723	1735
高	Kaou Tsung	乾隆	Koon Lung	1736	1795	1736	1795
仁	Jin Tsung	嘉慶	Kea King	1796	1820	1796	1820
宣	Souen Tsung	道光	Thou Kwang	1821	1850	1821	1850
—	—	咸豐	Hoon Fung	1851	1862	1851	1862
—	—	同治	Tung Che	1863			

THE MINOR DYNASTIES

魏 WEI, A.D. 220-265

文帝	Wan Te	黃初	Hwang Choo	220	226	7	220	226
明帝	Ming Te	太和	Tae Ho	227	232			
		青龍	Tsung Lung	233	236			
		景初	King Choo	237	239	13	237	239
廢帝	Fai Te	正始	Chung Cho	240	248			
		嘉平	Kea Ping	249	253	14	249	253
少帝	Shaou Te	正元	Chung Yuen	254	255			
		甘露	Kan Loo	256 to 259		6	254 to 259	

Emperor's Name		Post		Duration of Epoch	Reigned Year	Duration of Reign
末帝	Mo Te	景元 咸熙	King Yuen Huan Ho	A D 260 to 263 264 265	6	A D 260 to 265
吳 WOO, A D 221-280						
大帝	Ta To	黃武 黃龍 嘉禾 赤鳥 太神 建五 太 平 永 元 甘 寶 趙 鳳 天 冊 天 聖 天 紀	Hwang Woo Hwang Lung Kao Ho Chih Nonou Tao Yuen Shin Fung Koon Lung Woo Fung Tao Ping Yung Gan Yuen Hing Kan Loo Paou Tmg Koon Hung Fung Hwang Toon Tsch Toon So Toon Ko	221 228 229 231 232 237 238 250 251 252 253 254 255 256 257 258 263 264 265 266 268 269 271 272 274 275 276 277 280	31 5 6 17	221 252 253 257 258 263 264 to 280
廢帝	Foi To					
景帝	King To					
末帝	Mo Te					
北魏 PIII, or NORTHERN WEI						
道武帝	Taou Woo To	登國 皇始	Tang Kwo Hwang Che	386 395 396 to 397		

Emperor's Name		Epoch		Duration of 1 epoch	Reigned Years	Duration of Reign
明元帝	Ming Yuen To	天興	Toen Hing	398 to 401		A.D.
		天賜	Toen Yang	404 408	4	386 to 408
		永興	Yung Hing	409 413		
		神端	Shun Tuan	414 415		
		泰常	Tae Chang	416 423	15	409 423
太武帝	Tae Woo To	始光	Cho Kwang	424 427		
		神始	Shun Cho	428 431		
		延和	Yan Ho	432 434		
		太平	Tao Yon	435 439		
		太真	Tao Chin	440 451		
		真正	Ching Ping	452	27	416 451
文成帝	Wan Ching To	興安	Hsing Gan	453		
		興安	Hsing Kwang	454		
		太和	Tao Gan	455 459		
		和平	Ho Ping	460 465	11	452 465
獻文帝	Hoon Wan To	平安	Toon Gunn	466		
		天皇	Hwang Hing	467 470	5	466 470
孝文帝	Hsiaou Wan To	興承	Yan Hing	471 475		
		興明	Ching Ming	476		
		太和	Tao Ho	477 499	29	471 499
宣武帝	Ssuann Woo To	景正	King Ming	500 503		
		明始	Chung Cho	504 507		
		永平	Yung Ping	508 511		
		延昌	Yen Chang	512 to 515	16	477 to 515
孝明帝	Hsiaou Ming To	平昭	Ho Ping	516		

Emperor's Name	J pooh		Duration of J pooh	Reigned Years	Duration of Reign
	神	Shun Kwei	A.D. 517 to 518		A.D.
	正	Ching Kwung	519 524		
	孝	Hsiao Chang	525 527	12	516 to 527
孝莊帝	Chwang Te	Yung Gan	528 530	3	528 530
東海王	Tung Hae Wang	Koon Ming	.		1 month
節閔帝	Tsae Min Te	Tam Tao	531	1	531
安定王	Gan Ting Wang	Chung Hung	.		1 month
孝武帝	Hsiao Woo Te	Yung Ho	532 534	3	532 534

東 魏 TUNG, or EASTERN WEI

孝靜帝	Hsiao Tsung Te	天平	Tsoen Ping	534 537		
		元象	Yuen Seang	538		
		興利	Hing Lo	539 543		
		武定	Woo Ting	543 550	17	534 550

北 齊 PIH TSE, or NORTHERN TSE

文宣帝	Wan Ssuwan Te	天保	Tsoen Paon	550 559	10	550 559
廢帝	Fai Te	乾明	Keen Ming	.	.	1 month
孝昭帝	Hsiao Chao Te	皇建	Hwang Keen	560	1	560
武成帝	Woo Chung Te	大寧	Ta Ning	561		
		河清	Ho Twng	562 564	4	561 564
後主	How Choo	天統	Toon Tung	565 569		
		武平	Woo Ping	570 to 576	12	565 to 576
幼	Yew Choo	承光	Chung Kwang	577	1	577

後周 HOW CHOW, or LATTEL CHOW Area, PII CHOW

Emperor's Name		1 epoch		Duration of 1 epoch	Ruled Years	Duration of Reign
明帝	Ming Te	武成	Woo Chung	557 to 560	+	557 to 560
武帝	Woo Te	保定	Paou Ting	561 565		
		天和	Tseen Ho	566 571		
		建德	Koen Thé	572 577		
		宣政	Souen Chong	578	18	561 578
宣帝	Souen Te	大成	Tu Chung	A few months only		
靜帝	Tang Te	大象	Tu Seang	579 580		
		大定	Tu Tung	581	3	579 581

遼 TEE LEAOU, A TARTAR DYNASTY

		No epoch for the first 9 years					
太祖	Tao Taoo	肇崩	Shin Taah	907 915			
		天賛	Tseen Tchau	916 921			
		天顯	Tseen Hoon	922 925			
		天顥	Tseen Hoom	926	20	907 926	
太宗	Tao Tung	天顯	Jiawu Tung	927 937			
		會同	Tu Tung	938 946			
		大同	Tseen Luh	947	21	947 947	
		天錄	948 950	3	946	950	
世祖	Isho Tsung	應寧	Yung Leih	951 968	18	951 968	
	Muh Tsung	保寧	Paou Ning	969 978			
	King Tsung	乾亨	Koen Hanq	979 982	14	969 982	
聖	Shwang Tsung	統和	Tung He	983 1011			
		開泰	Kao Tse	1012 1020			
		太平	Tao Ping	1021 to 1031	49	983 to 1031	

Emperor's Name		Epoch		Duration of Epoch	Reigned Years	Duration of Reign
興宗	Hung Tsung	景福	King Fuh	1 D		1 D
道宗	Thou Tsung	重熙	Chung He	1033 to 1054	23	1033 to 1054
		清寧	Tsung Ning	1055 1061		
		咸雍	Sian Yung	1065 1074		
		太康	Tao Kang	1075 1084		
		大安	Ta An	1085 1094		
		壽隆	Show Lung	1095 1100	46	1095 1100
天祚帝	Tzen Tho Te	乾統	Koon Tung	1101 1110		
		天慶	Toon King	1111 1120		
		大保	Paon Ta	1121 1125	25	1101 1125

金 THE KIN, A TARTAR DYNASTY

太祖	Tao Tsuo	天輔	Toon Foo	1118 1123	6	1118 1123
太宗	Tao Tsung	天會	Toon Hwai	1124 1135	12	1124 1135
熙宗	He Tsung	天會	Toon Hwai	1136 1139		
		天眷	Toon Kwon	1140 1142		
		皇統	Hwang Tung	1143 1151	16	1136 1151
海陵王	Hao Lung Wang	天德	Toon Teh	1152 1155		
		貞元	Ching Yuan	1156 1158		
		正隆	Ching Lung	1159 1163	12	1152 1163
世宗	Sho Tsung	大定	Ta Ting	1164 1192	29	1164 1192
章	King Tsung	明昌	Ming Chang	1193 1198		
		承安	Ching Gan	1199 1203		
		泰和	Tao Ho	1204 1211	19	1193 to 1211
衛紹王	Wei Shaou Wang	大安	Ta Gan	1212 to 1214		

Emperor's Name		Epoch		Duration of 1 epoch	Reigned Years	Duration of Reign
宣宗	Seuen Tsung	崇	慶	Tsung King	1215	1 D
		至	寧	Chie Ning	1216	5
		貞	祐	Ching Yew	1217 1220	1212 to 1216
		興	定	Hing Ting	1221 1226	
	Gao Tsung	元	光	Yuen Kwang	1227 1228	12
		正	大	Ching Ta	1229 to 1235	
		開	興	Kao Hing	1236	
		天	興	Toon Hing	1237	9

The preceding Chronological Tables have been compiled from various historical works of importance. Among these it must be observed, that from the Tsin dynasty, B.C. 255, to the present time, the principal authorities which have been employed are the Japanese chronological work mentioned in the Introductory Remarks (p. xv) and a series of eight Chinese rolls in the author's possession, which contain their chronology from the accession of the Tsin to the subversion of the Ming dynasty, A.D. 1644. As these rolls, in addition to the whole of the 'Nien Haou,' or epochs of the regular dynasties, record those of the principal minor dynasties, and as a collection with the 'She Ko' and other esteemed historical annals has proved them to be perfectly trustworthy, they form the chief authority for those epochs, their text being adopted throughout.

These Tables are to be employed for ascertaining the year of any historical or other event of which the date is required. In the early portion, the dates of the dynasty and emperor alone are mentioned, the 'Nien Haou,' or Epoch, not having been introduced until about 163 years before the Christian era. From that time, in addition to the above mentioned dates, the year of the epoch is given, and this latter mode is that employed in the major part of the observations of comets in the treatises from which the present translation has been made. In the Chinese historical works, the mode of reckoning by cycles of 60 years is that usually followed.

In Table A will be found the combinations of the Kao Tso characters, by which the 60 years of these cycles are expressed, and Table C shows the first year of each of them, from the first, commencing B.C. 2637, to the seventy sixth, which began A.D. 1864. Table A is also employed to express the periods of 60 days into which the Chinese year is divided, and whose appellations are the same as those of the years of the cycle. As this cycle of 60 years, although in constant use in the historical works, is not employed in expressing the dates of most of the cometary observations contained in the present publication, no mention of it occurs among the preceding examples of the

reduction of Chinese time to our reckoning. This opportunity is therefore taken of explaining its use.

To find a given year of the cycle, and to express it in our manner, we must proceed as follows — The date of the dynasty and of the accession of the Emperor having been ascertained from the Chronological Tables, the date of the first year of the cycle in which that Emperor flourished will appear from Table C, that of the first years of cycles. All that is then needed is to find in the 60-year Table A the combination whose date is required, when the number above it will be that of the year of the cycle represented by that combination, and the corresponding year according to our reckoning can be easily ascertained. For example in the 'Tung Koon Kang Muh' it is recorded, that during the reign of the Emperor Tso Tsung, of the Tung dynasty, in the year of the cycle 'Yih Maou,' an eclipse of the Sun occurred. On reference to the Chronological Tables, the date of the accession of this Emperor will be found to have been A.D. 763, which year Table C shows to have fallen in the 57th cycle, whose first year was A.D. 724. In Table A it will be seen that the combination 'Yih Maou' is the 52nd of the cycle, consequently the year required, according to our system, is A.D. 775.

As respects the ordinary use of these Chronological Tables, the instructions given in p. viii of the Introductory Remarks will be found amply sufficient.

Tables B and D are those required for finding the characters for the 1st of January in any year, B.C. or A.D. The first of these, B, contains the combinations of the Keo Tzeu characters necessary to form the 80-year Table, whose construction is explained in the Introductory Remarks, p. xviii, and D is the auxiliary table, showing the first year of each period of 80 years, from B.C. 2561 to A.D. 2000, arranged under the letters B.C. and A.D.

Table E shows the days on which the characters for January 1 occur, both in common and leap years. In Table F will be found the first year of each lunar cycle of 19 years, from B.C. 609 to A.D. 1900, and Table G gives the first day of each moon in every year of this cycle of 19 years. F and G must be considered as approximate only, but they are sufficiently accurate for the purpose required.

The Tables A, B, D, E, F, and G, are those to be employed in finding the moons and days, and as their use is fully explained in the Introductory Remarks, pp. xv-xv, they need no further notice here.

In the Plate marked II will be found the Tables referred to in pp. xviii and xix of the Introductory Remarks, the first being that of the Two Ko, or twenty four divisions of the year, and the second that of the twelve Kung, and, it may be observed, it would appear that the names of these latter, not being anywhere described as referring to existing asterisms, as composing them, are to be considered as indicating divisions only, rather than individual groups of stars. It must also be remarked that the modern names, as far as at present has been ascertained, do not occur in any astronomical treatise whose compilation dates before the accession of the present dynasty.

CHINESE CELESTIAL ATLAS

The Twenty-Eight Stellar Divisions their determinations Addressed, their
Except North and South and East unpaired with the three great Gates

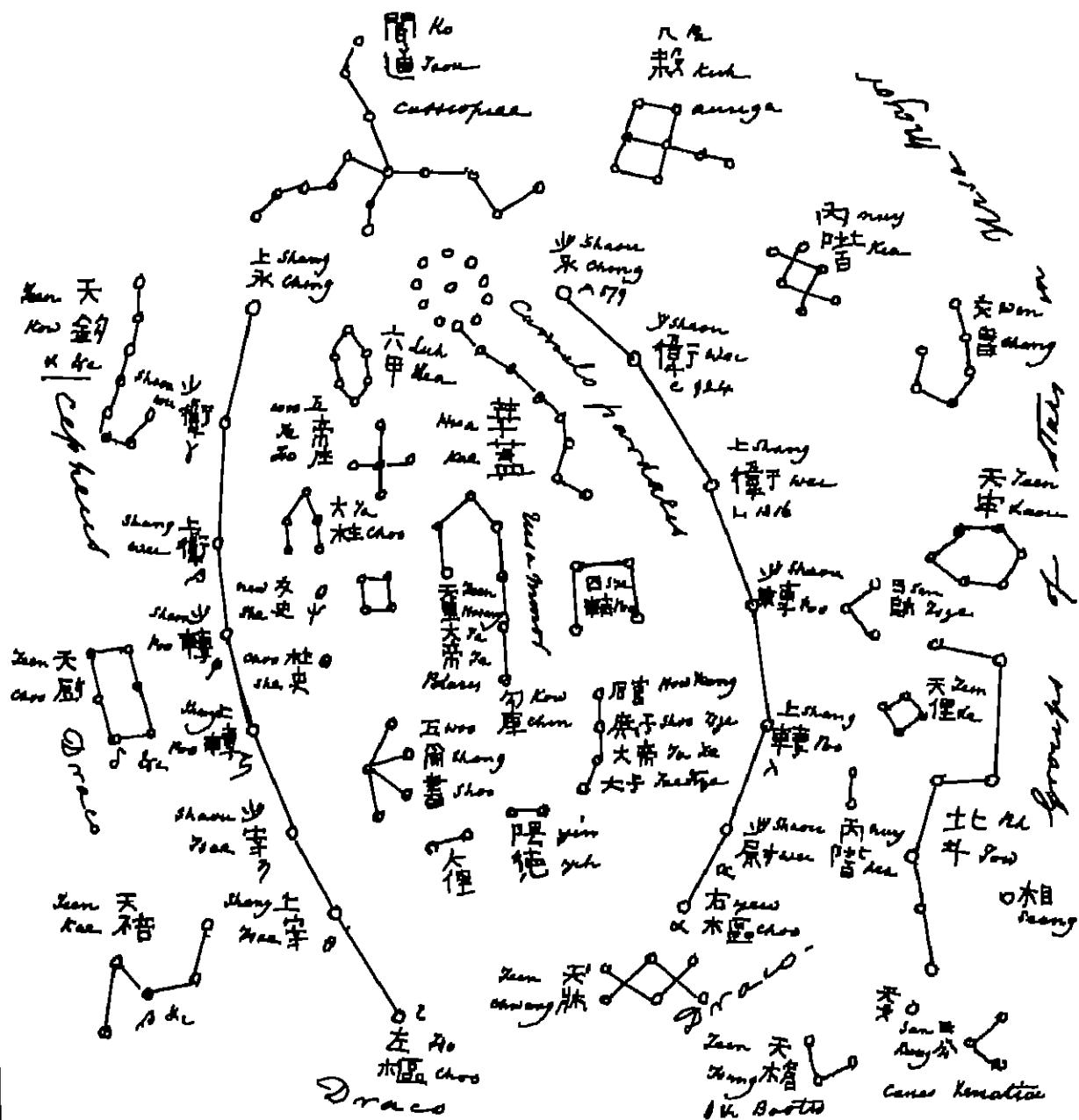
No.	Names	Astronomical Associations	Extent on S.	Ext. on the Equator
1.	角 Leo	α and β Virgo and α and δ Corvus	comes Piscis to Corvus	11° 44'
2.	亢 Keng	α and δ Virgo and α and γ Corvus	Bootes to Lepus	9° 19'
3.	氐 Zi	α, β and γ Corvus	Bootes to Lepus	16° 41'
4.	昴 Yang	β, δ and γ Scorpis	Ophiuchus to Lepus	5° 28'
5.	昴 Son	α and τ Scorpius	These and stars near	6° 9'
6.	尾 Wei	ε and η Scorpii	Id. Id.	21° 6'
7.	箕 Zhi	κ, δ and θ Sagittarii	Id. Id.	8° 46'
8.	斗 Tou	η, τ, ο, γ, δ, μ Sagittarii	Id. Id.	24° 34'
9.	牛 Niu	α, β and δ Tauri	Dyra to Capricornus	6° 50'
10.	女 Niu	α, β, γ and δ Aquarii	Cygnus to Aquarius	11° 7'
11.	尾 Hsueh	β Aquarii and another	Equuleus to Pisces	8° 41'
12.	氐 Hsueh	δ Aquarii & ε Piscium	Cepheus to Pisces Notans	14° 53'
13.	星 Shing	α, β Piscium & κ	Cygnus to Id.	17° 4'
14.	尾 Hsueh	γ Piscium & Andromeda	Aquarius to Cetus	10° 25'
15.	箕 Hsueh	β Andromeda & α Ceti	Cassiopeia to Cetus	14° 30'
16.	牛 Lew	δ, γ and α Ceti	Andromeda to Cetus	12° 4'
17.	星 Lew	The 3 stars in Ophiuchus	Pisces to Cetus	15° 45'
18.	昴 Lew	The Pleiades	Pisces to Eridanus	10° 24'
19.	畢 Peck	α, γ and δ Tauri	auriga to Eridanus	16° 34'
20.	觜 Teng	α and others in Ophiuchus head	small stars near	- 24'
21.	參 Han	δ, β, γ and δ Tauri	Oreon to Lepus	11° 34'
22.	昴 Teng	γ, ε and λ Tauri	Pisces to Argo	32° 49'
23.	鬼 Kwei	γ, δ, ε, ο, θ Cancer	Cancer to Argo	2° 24'
24.	木木 Lew	δ, ε, θ, ι, ο, η Hydrae	λεος to Hydra	12° 14'
25.	星 Lew	α, ι, ο, η Hydrae	λεοντος to Hydra	5° 48'
26.	昴 Chong	α, ι, ο, η Hydrae	Missa Major to Hydra	17° 19'
27.	翼 Yih	α and others on Cetus	a few stars near	20° 25'
28.	軫 Chen	β Tauri	Id. Id.	15° 30'

紫微垣 Zǐwéiyuán The Southern circumpolar Stars

天而墮 Zon she queen Space bounded by darkness

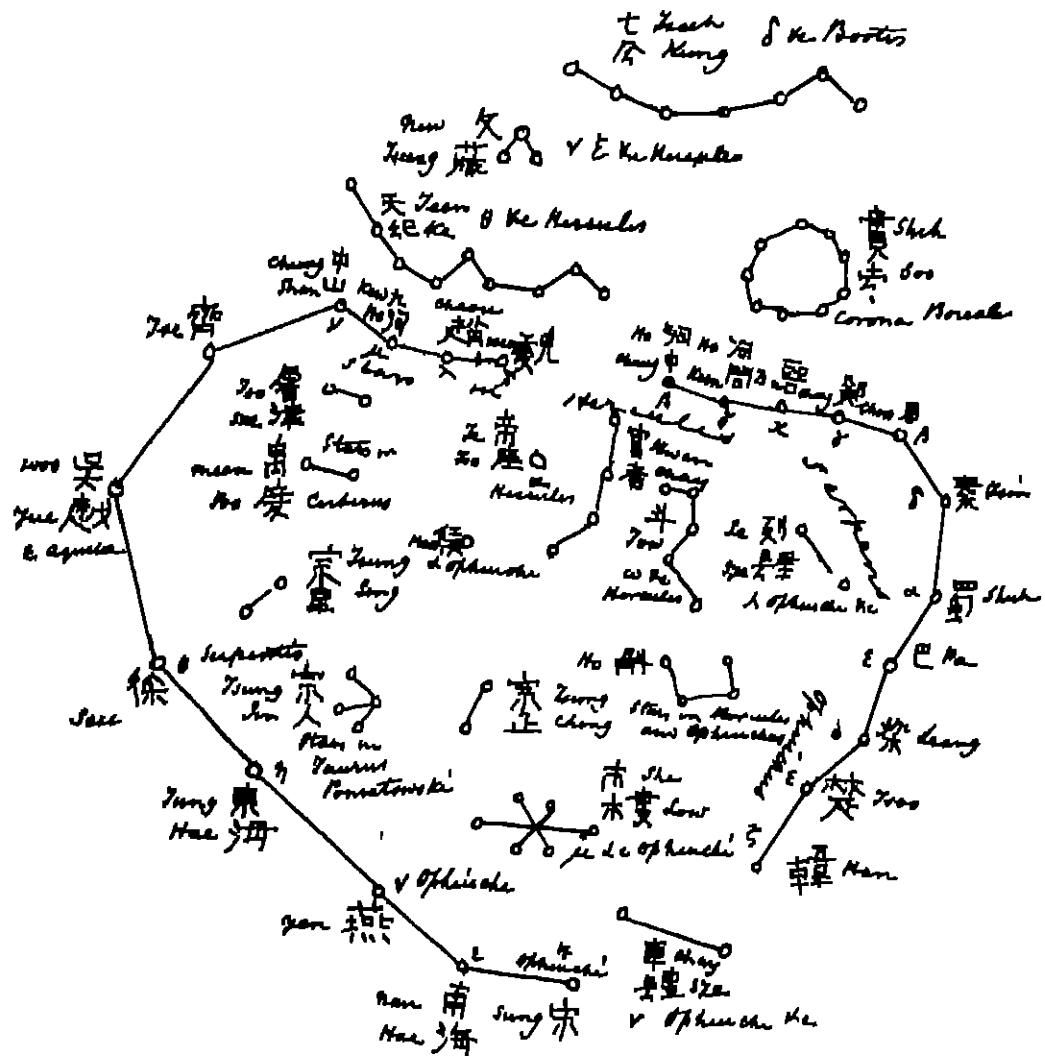
太微垣 See Wei Yuan Star within Stars in Leo and Virgo

^{1st} Type The Northern Circumpolar States
^{2nd} We as many of the groups cannot
^{3rd} Xuen be identified their position alone is given

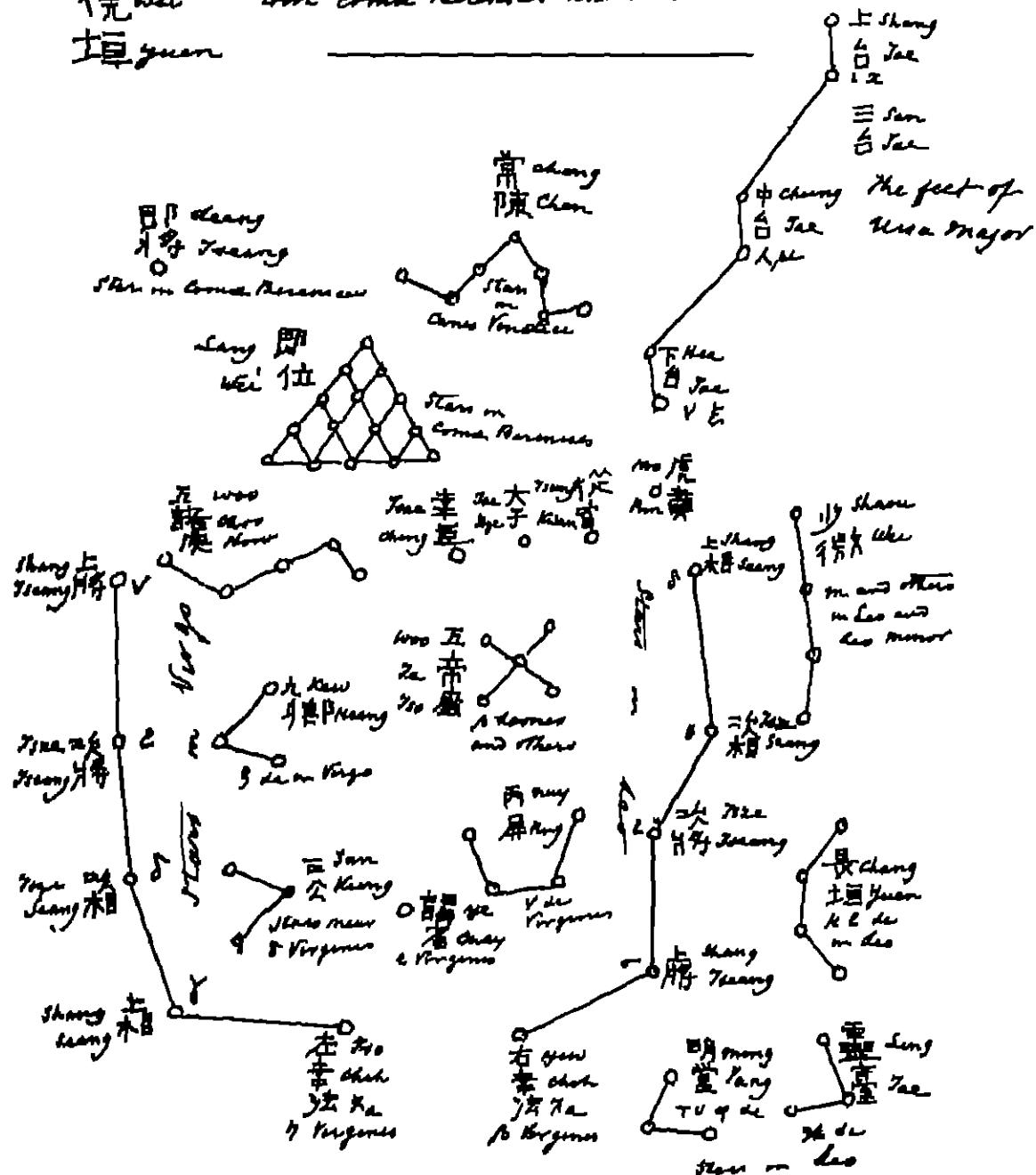


天市垣

The space bounded by
surfboards comprising necessarily
the upper part of Ophorus etc.



大 sea shore within stairs on sea and long
山 also with coral reefs and stairs near
海 garden



The Twenty Eight Stellar Divisions.

Fig. 5

1 門 Keo

Chow Tung 鄭仲Small Star in
Coma Horsecollar

Zem 天田 → o + Verges

Big Dipper
 Little Dipper
 Dipper and its Handle
 Dipper and its Handle

3 五 七

Diagram illustrating the 28 Mansions of the Chinese zodiac, arranged in a grid:

- Top Left:** Star in Libra (星在天秤) - 車路 (Che Lu)
- Top Right:** Star in Aquarius (星在水瓶) - 雷電 (Lei Di)
- Middle Left:** Star in Scorpio (星在天蝎) - 天蝎 (Tian He)
- Middle Center:** Star in Scorpio (星在天蝎) - 天蝎 (Tian He)
- Middle Right:** Star in Scorpio (星在天蝎) - 天蝎 (Tian He)
- Bottom Left:** Star in Aquarius (星在水瓶) - 水瓶 (Shui Ping)
- Bottom Center:** Star in Aquarius (星在水瓶) - 水瓶 (Shui Ping)
- Bottom Right:** Star in Aquarius (星在水瓶) - 水瓶 (Shui Ping)

Below the grid, there are several small diagrams of the Mansions:

- Top row: 車路 (Che Lu), 雷電 (Lei Di)
- Middle row: 天蝎 (Tian He), 天蝎 (Tian He), 天蝎 (Tian He)
- Bottom row: 水瓶 (Shui Ping), 水瓶 (Shui Ping), 水瓶 (Shui Ping)

2 八 Kang

200 右臂 Right arm
 201 雙臂 Double arms
 202 提手 Hand
 203 手 Root
 204 大角 Antlers
 205 角 Roots
 206 左臂 Left arm
 207 手臂 Arm
 208 手足 Foot
 209 手足 Roots

八
 九
 Kang
 九
 九
 門
 Pa
 Men
 Stars on Centaur and Lepus

4 房 *Tang*

The diagram illustrates the Eight Trigrams (Bagua) arranged in a circle:

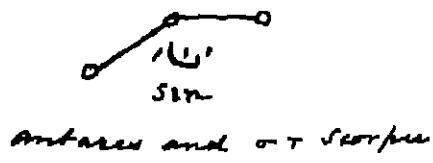
- 乾 (Qian)**: Represented by ☰. Meaning: Heaven. Associated with the element Wood.
- 巽 (Xun)**: Represented by ☱. Meaning: Wind. Associated with the element Wood.
- 坎 (Kan)**: Represented by ☲. Meaning: Water. Associated with the element Water.
- 艮 (Gen)**: Represented by ☳. Meaning: Mountain. Associated with the element Earth.
- 震 (Zhen)**: Represented by ☴. Meaning: Thunder. Associated with the element Wood.
- 离 (Li)**: Represented by ☵. Meaning: Fire. Associated with the element Fire.
- 否 (Pi)**: Represented by ☶. Meaning: Opposition. Associated with the element Water.
- 泰 (Tai)**: Represented by ☷. Meaning: Union. Associated with the element Earth.

Below the trigrams, their meanings are described:

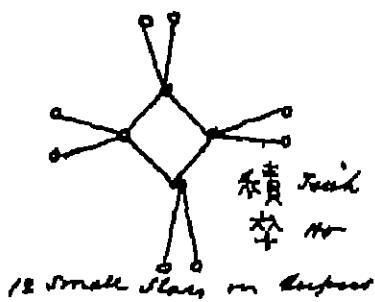
- 乾**: Heaven. Star in Scorpions.
- 巽**: Wind. Star in Libra.
- 坎**: Water. Star in Hainan.
- 艮**: Mountain. Star in Labora.
- 震**: Thunder. Star in Aquarius.
- 离**: Fire. Star in Sagittarius.
- 否**: Opposition. Star in Scorpio.
- 泰**: Union. Star in Leo.

On the left side of the diagram, there is a label:

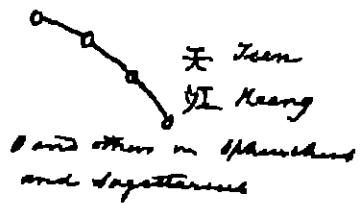
Jing
Hai

5 亼 Sin

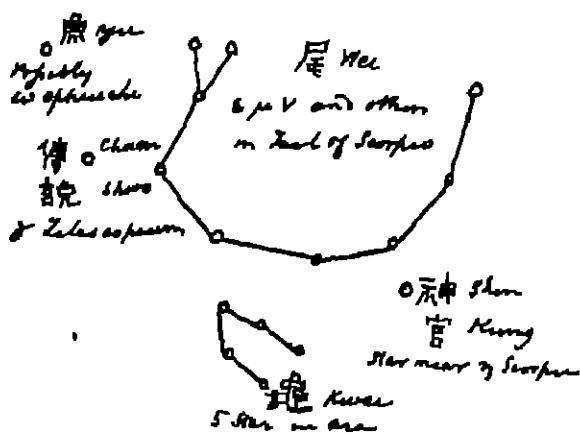
Antares and α Scorpii



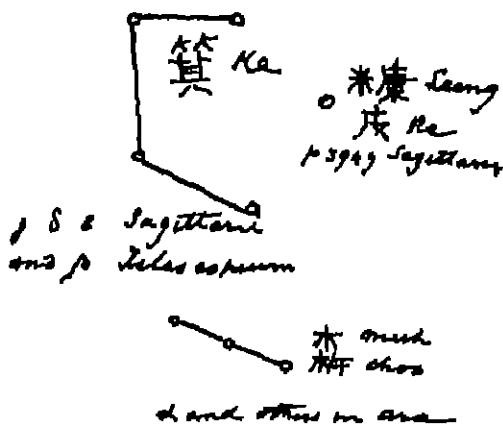
12 Small Stars in Sagittarius

6 戰 Wei

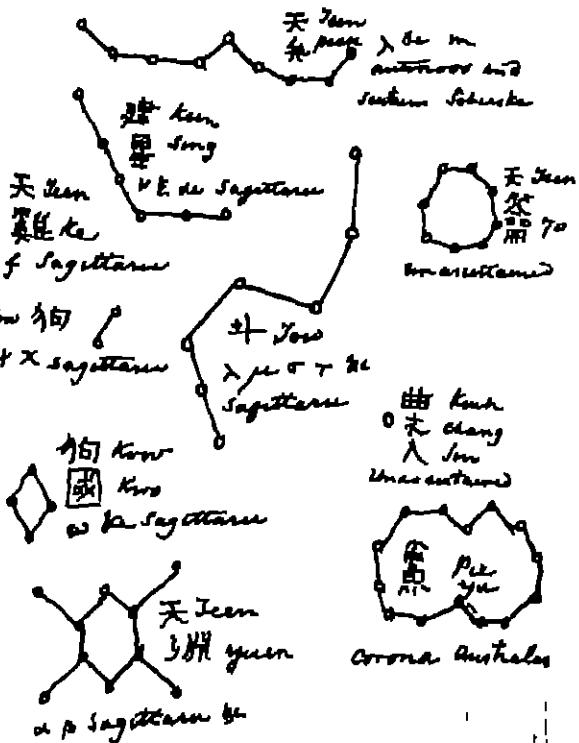
θ Leonis and others in Sagittarius



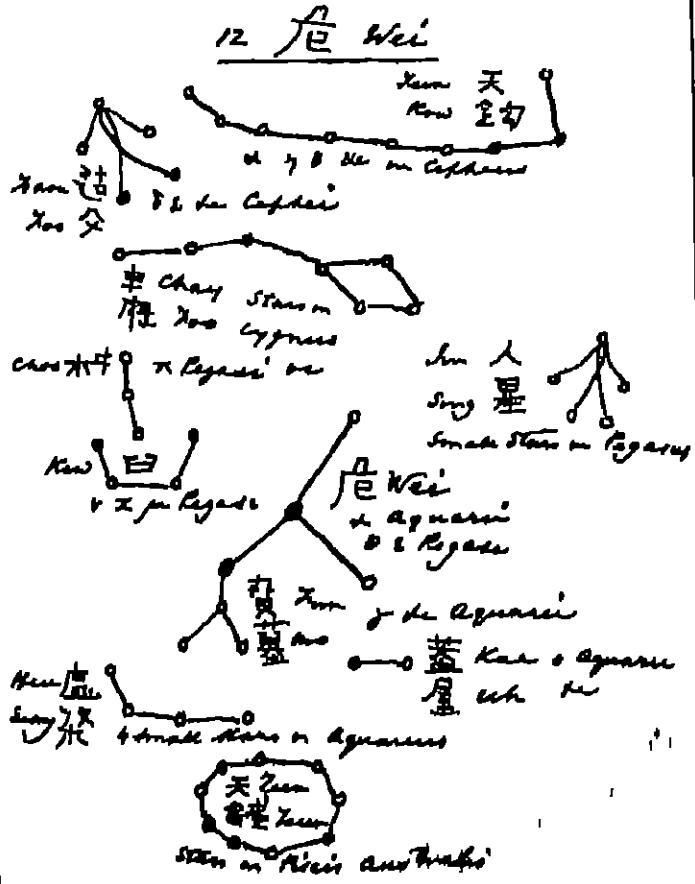
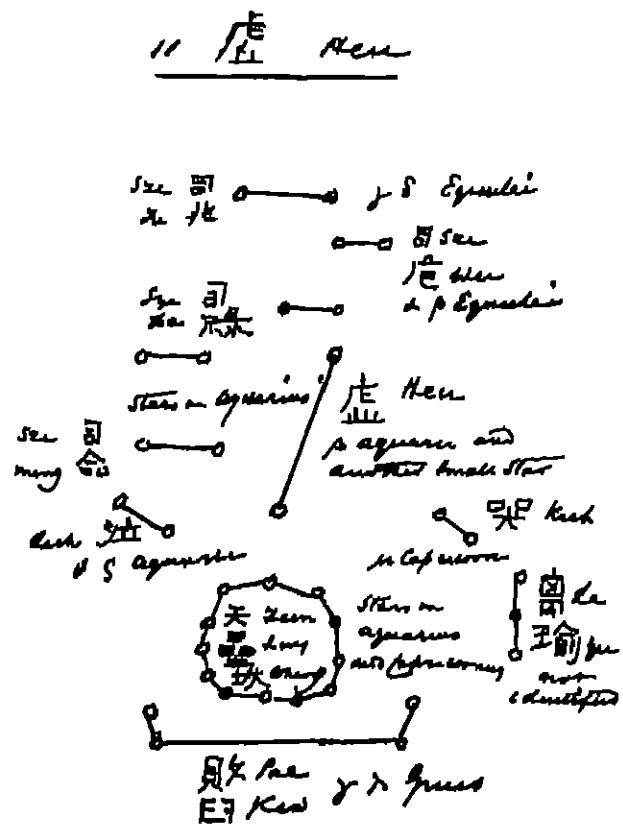
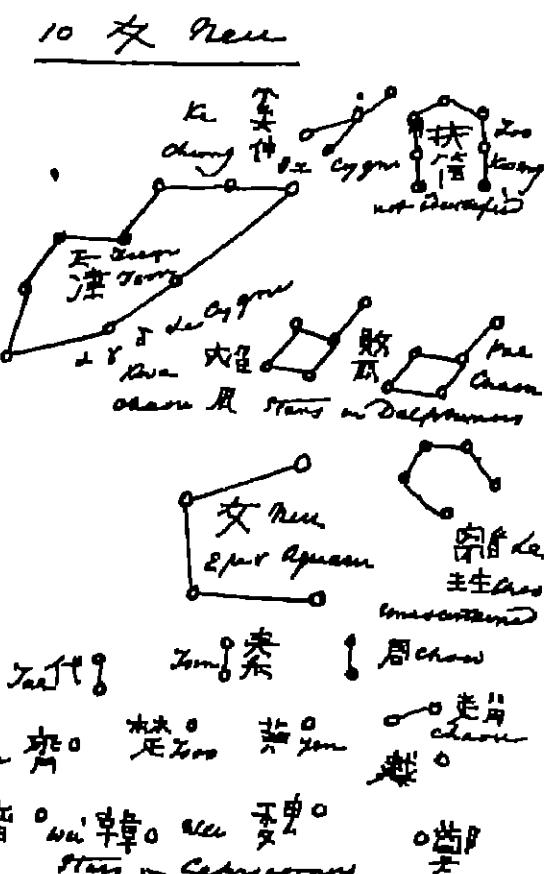
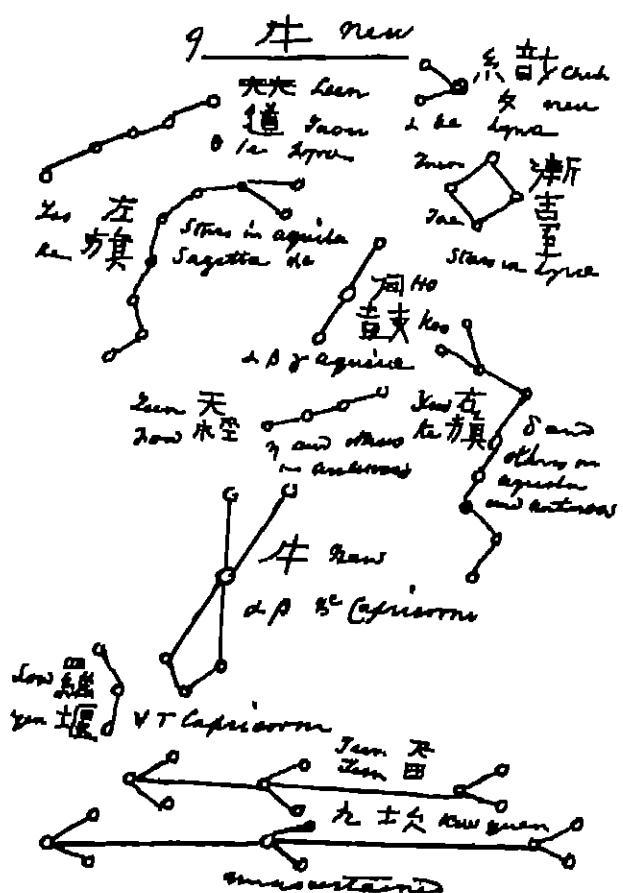
η Leonis and others in tail of Scorpius

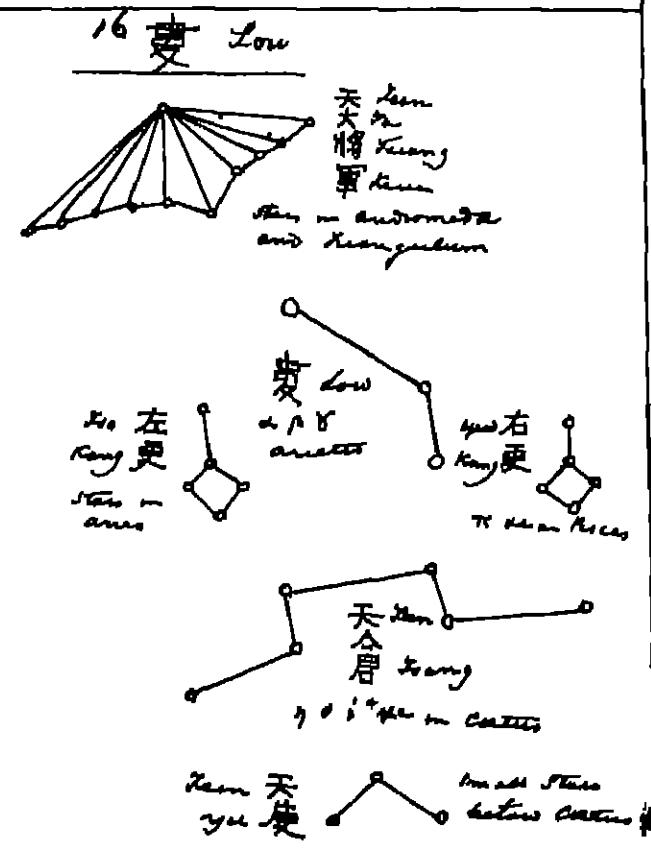
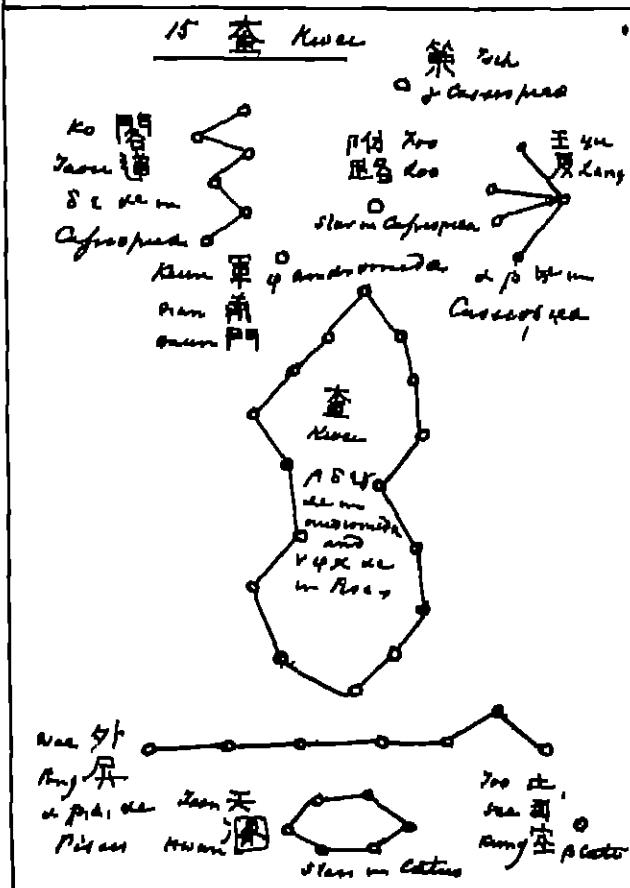
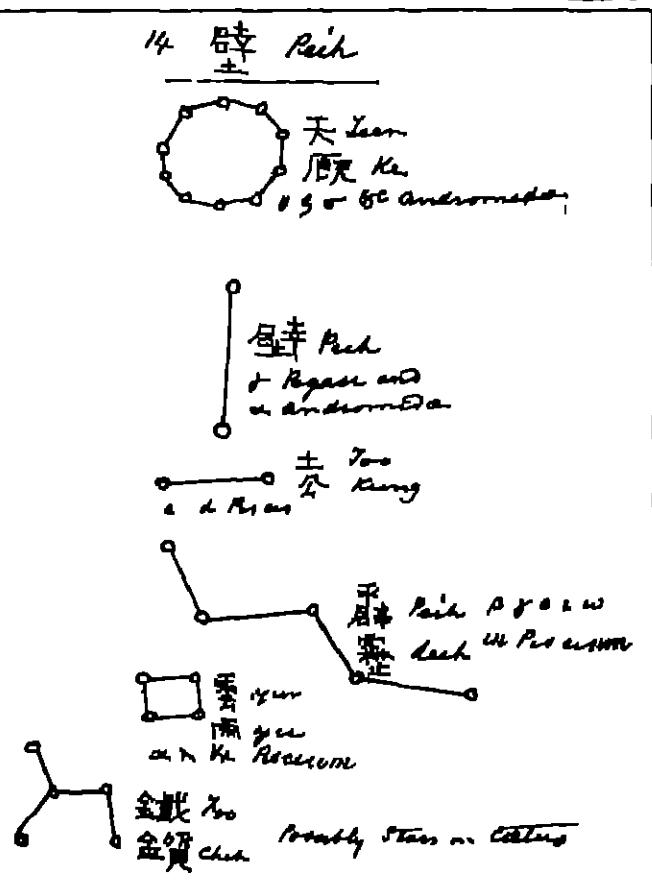
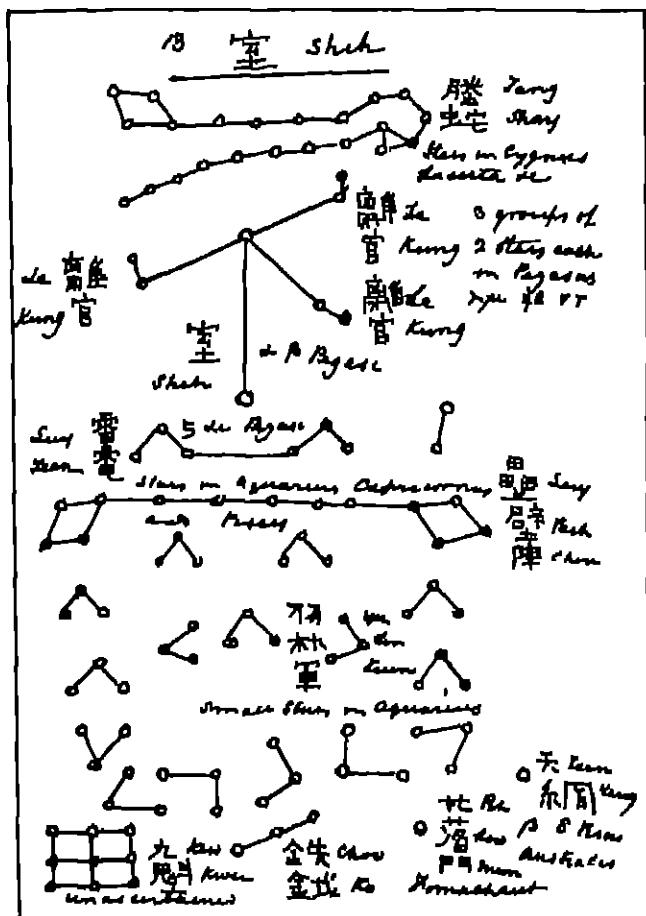
7 其 Ke

ι Sagittarii and α Telescopium

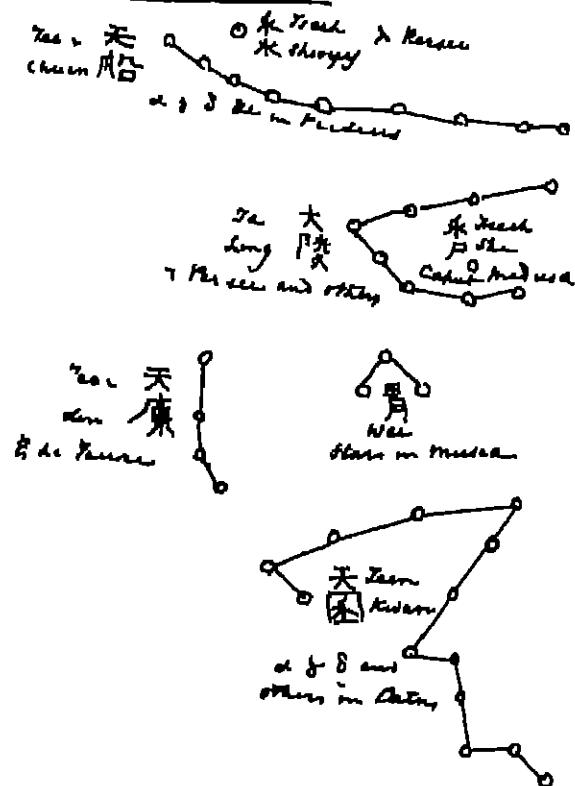
8 斗 Tow

Star clusters and asterisms in Sagittarius, Scorpius, and surrounding constellations.

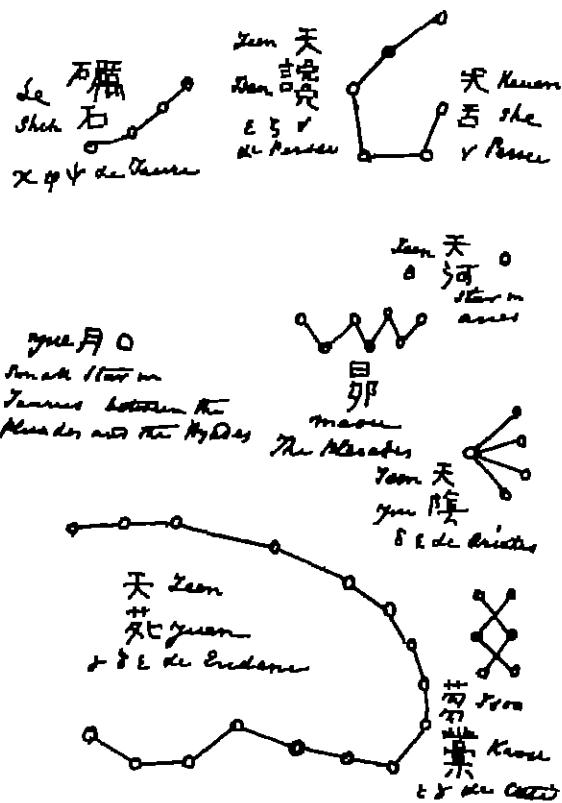




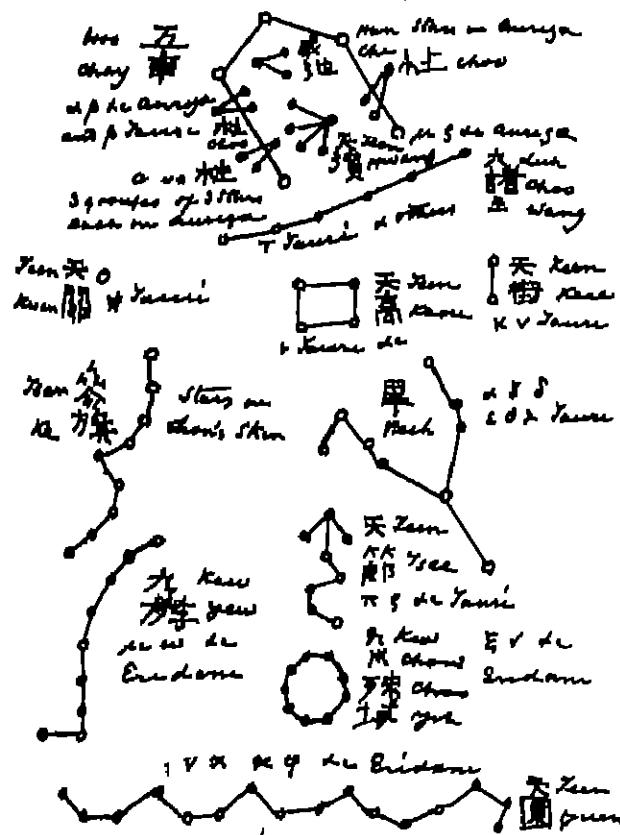
17 胃 Wei



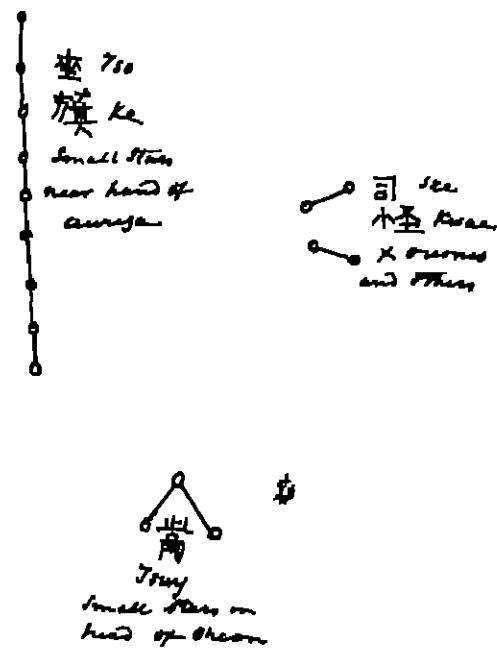
18 口 Mouth



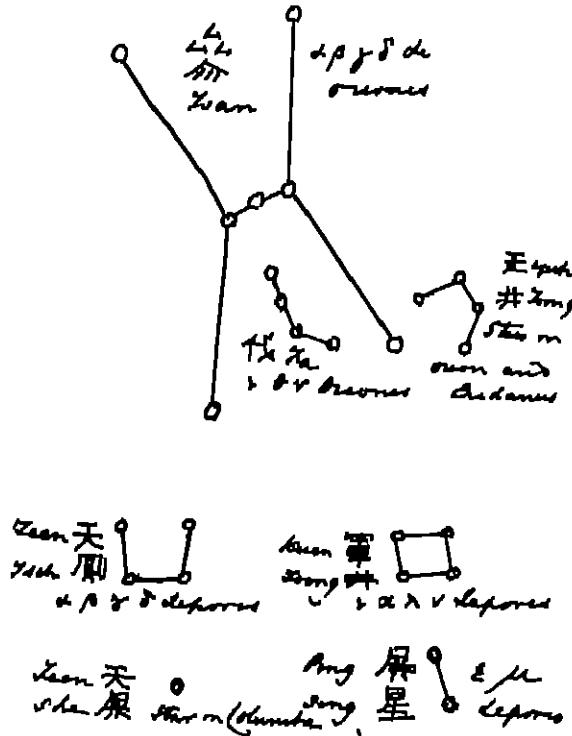
19 脐 Peh



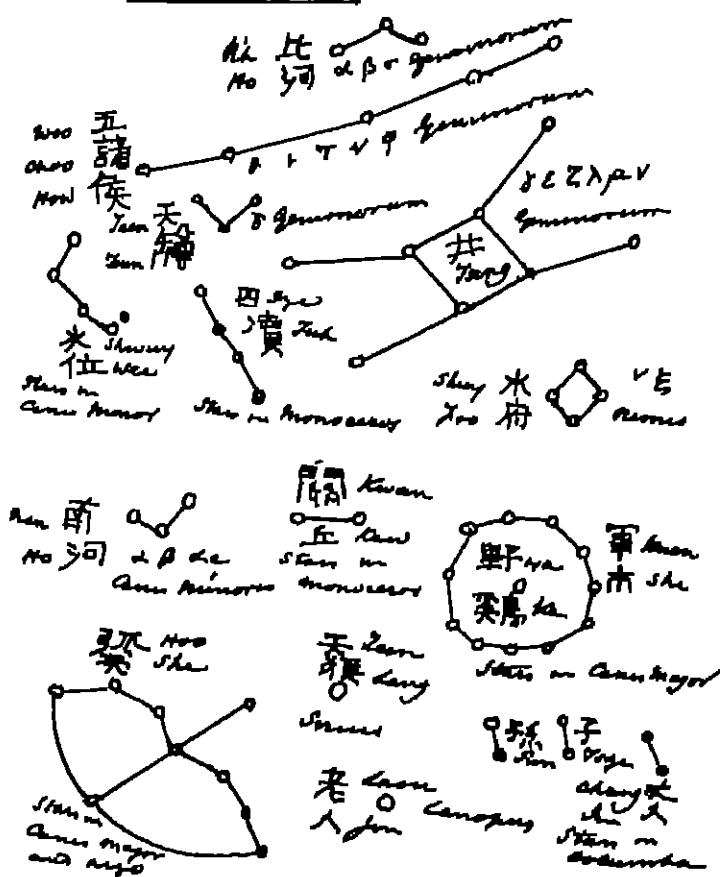
20 肺 Fei



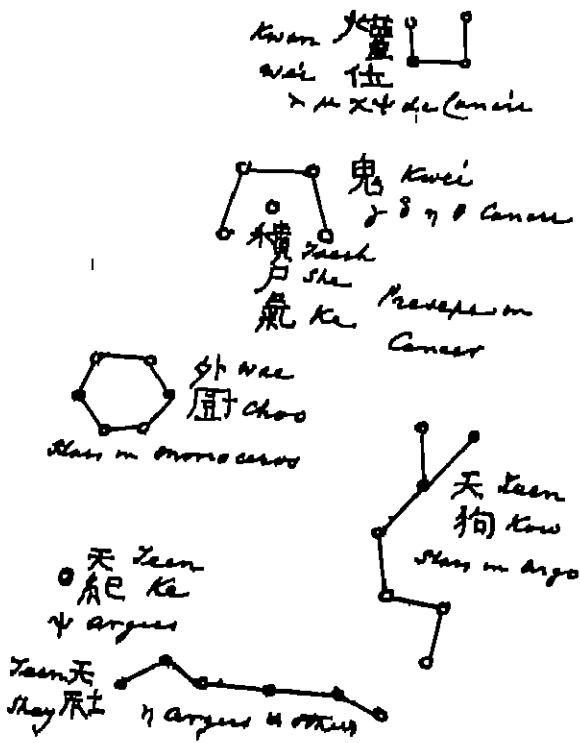
21 4⁴ Tsan



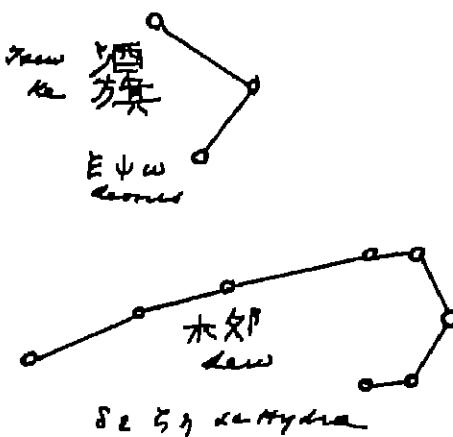
22 # Tony



23 鬼 *Kwei*



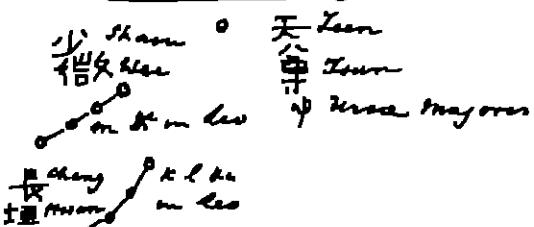
24 木郊 *Lew*



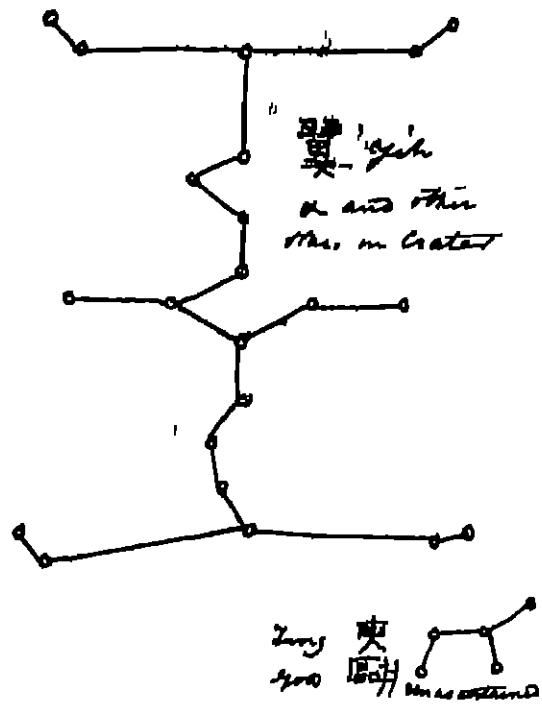
25 五七 Song



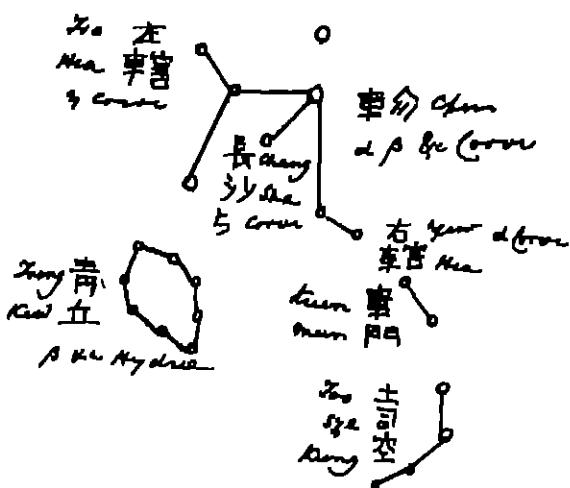
26 張 Cheng



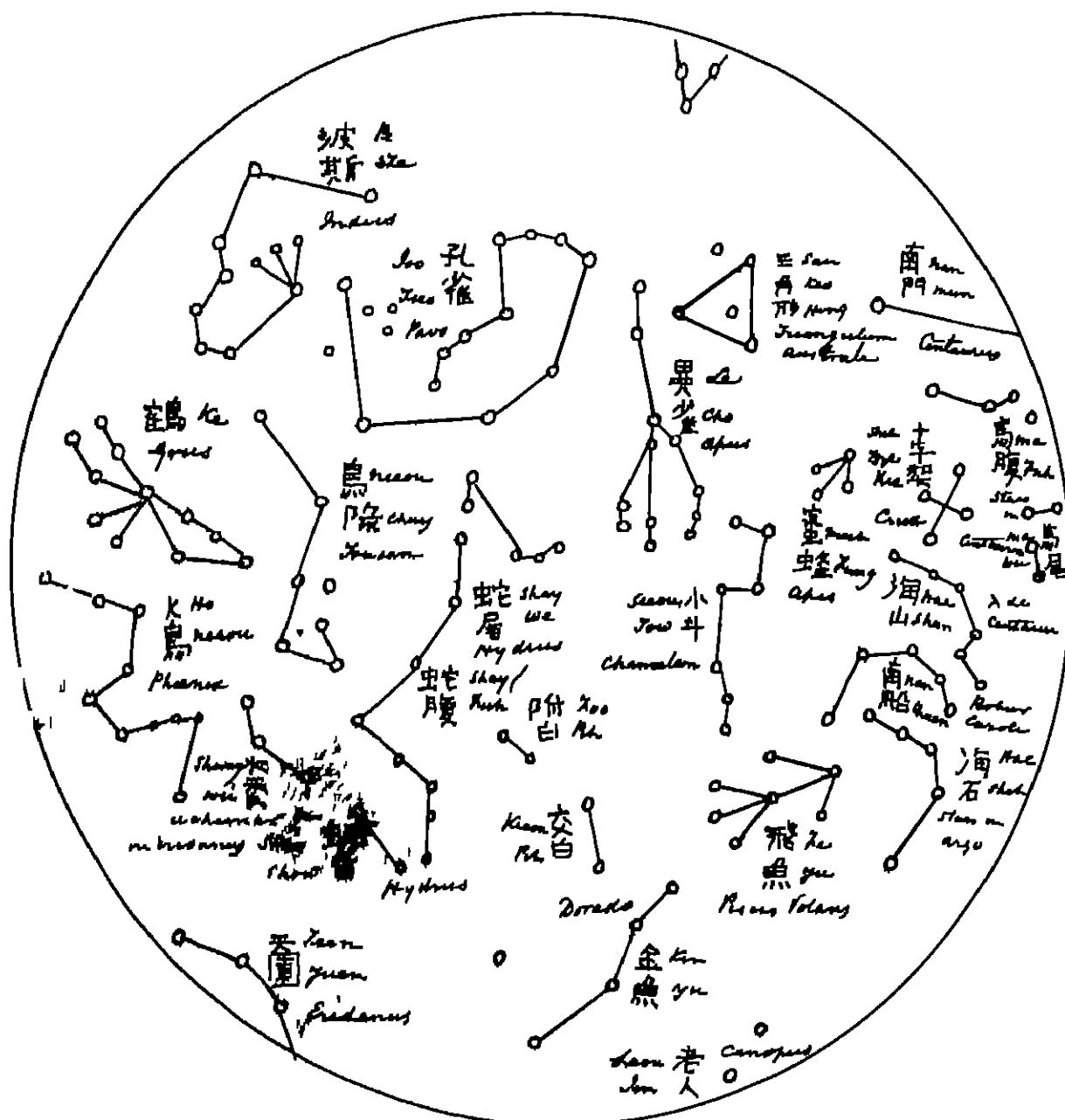
27 翼 John



28 車介 chen



The Southern Circumpolar Stars



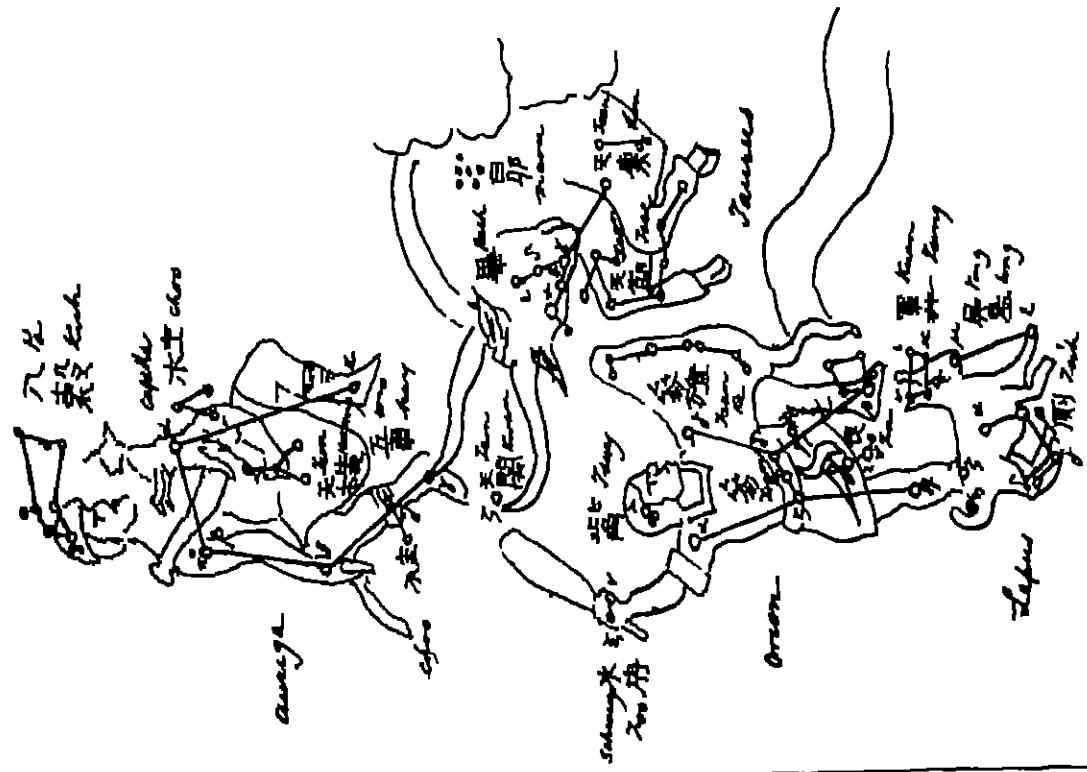
Index to the Asterisms on the preceding Atlas
The first column of Figures is the number of the Plate, the
second, that of the Stellar Division on which they occur

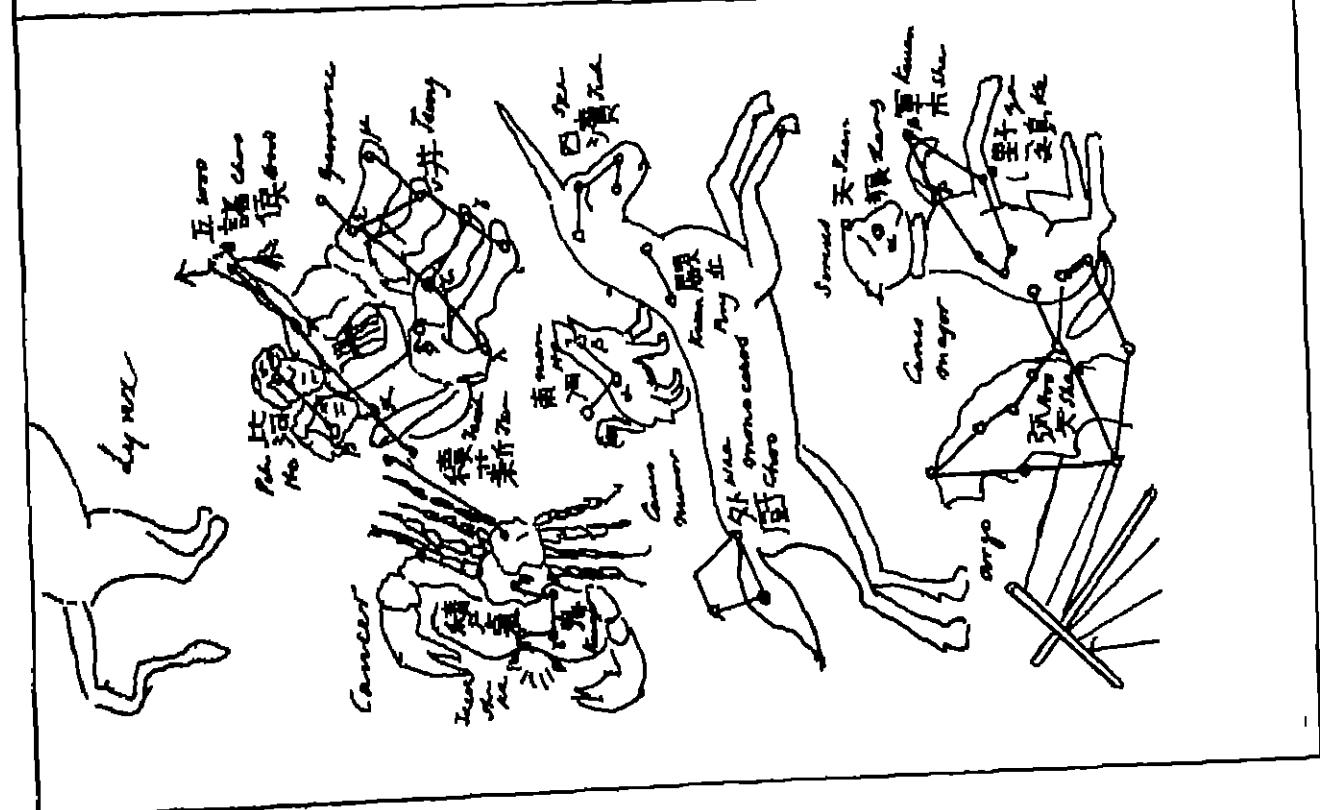
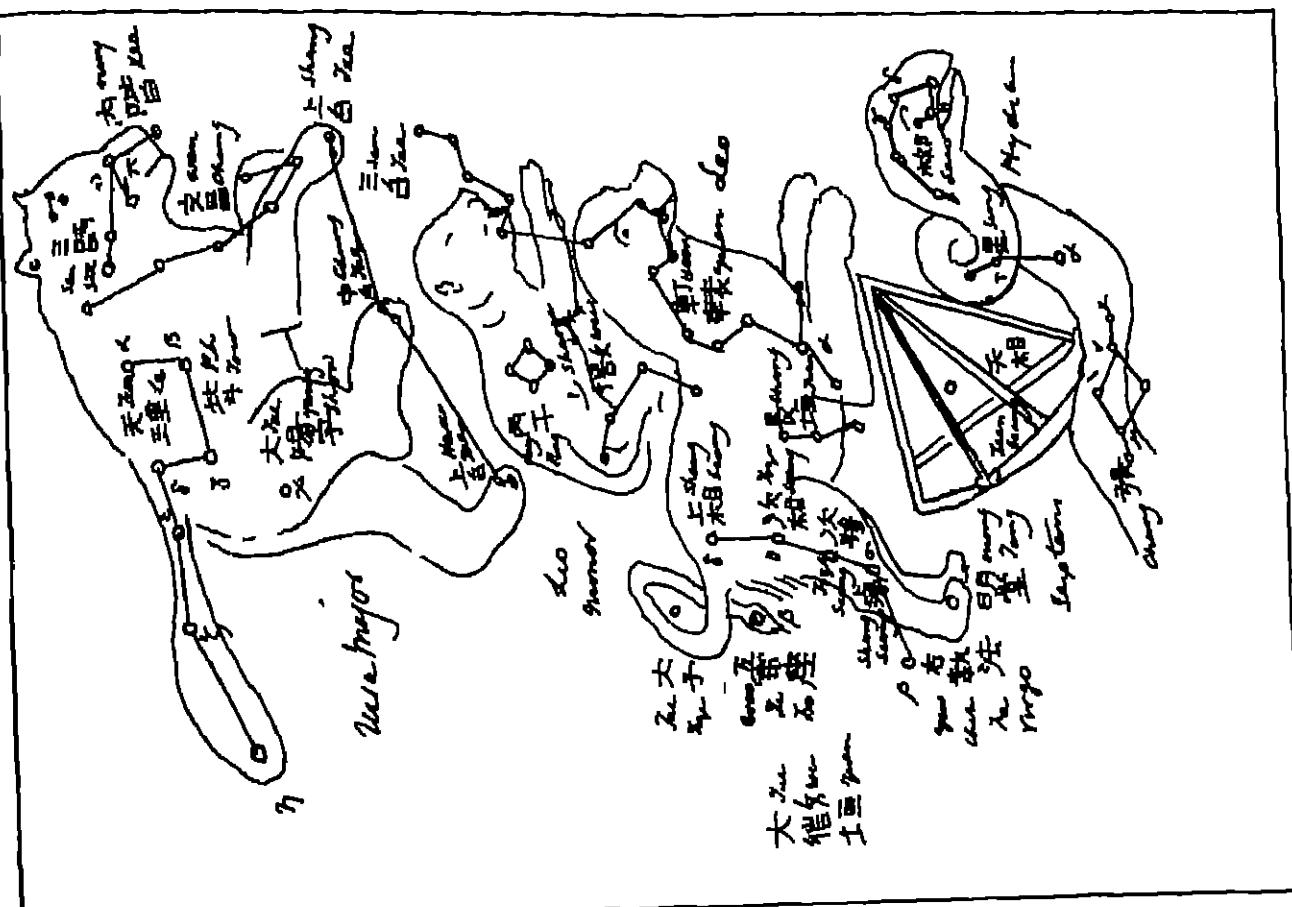
Chang 59	11	26	Huen yuen	11	25	Kow low	5	1	Huen yuen	12
Chang chow	4		Huen long	7	12	Kow	6	8	Huen ha	3
Chang yuen	4		Huen 5 D	7	11	Kow chow	2		Huen tho	10 22
Chang huen	11	26	Ho	3		Kow kow	6	8	Huen huen	5 1
Chang sun	11	22	Ho chung	3		Kuen long	10	21	Huen chung	12
Chang sha	11	28	Ho leam	3		Kuk	7	11	Huen tseng	3
Chao	8		Ho koo	7	9	Kua chau	7	10	Huen tsai	7 10
Chau	7	10	Ho tsien	12		Kwan lee	10	23	Huen tsai	2
Chau tsow	6	8	Ho or Ho She	10	22	Kwan kow	10	22	Huen tsai	7 9
Chay too	7	12	Hoow pun	4		Kwue 5 D	8	15	Huy kaa	2
Chay ta	6	3	How	8		Kwue 5 D	10	23	Huy kong	4
Chay see	0		How tung	2		Kwui	6	6	Huy kong	11 25
che we	3	2	Kwan chay	3						
chin chay	5	3				Long or longlong	10	22	Pa	3
Chon tseng kuen	6	3	Iow long	7	22	Long keeang	4		Pa kueh	2
Chon 5 D	11	28	Iow tsow	12		Long wen	4		Pae chau	7 10
Chon nne	7	9				Kaon leu	10	22	Pae kau	7 11
Chung	3		Kai uh	7	12	Leen or L che	12		Pai see	12
Chow	5	1	Kang 5 D.	5	2	Le choo	7	10	Pak 5 D	8 14
Chow	9	19	Kang she	5	3	Le kung	8	13	Pak 5 D	9 19
Choo	7	12	Kang Ho	5	3	Le shea	9	18	Pak leek	8 14
Choo ko	8	10	Ke 12	12		Le yee	7	11	Pee yuh	6 5
Choo sha	2		Ke chun tsengham	5	3	Leeng	3		Pid Ho	10 21
Chow	3		Ke chung	7	10	Leeng Pa	6	7	Pid low mun	8 13
Chow	7	10	Ke Tsoo	11	28	Leen sue	3		Pid tow	2
Chow Tong	5	1	Ke kuan	5	3	Leen tawn	7	9	Ping	10 21
Chuen shoo	6	6	Ke 5 D	6	7	Lieh	7	11	Ping sing	5 1
Chung Yee	4		Keon pak	12		Leen s D	10	23	Ping tawn	5 1
Chung Shan	3		Keo 5 D	5	1	Ling Tae	4			
Ta	5	4	Kewn she	9	18	Lou 5 D	8	16	San tho Hong	12
Pa	10	21	Kewn tien mun	8	15	Lou tsow wan	9	19	San tawng	4
Tang 5 D	5	4	Kewn mun	11	28	Luk kia	2		San tawng	4
See yee	12		Kewn she	10	22	Luk pak chin	8	13	San tye	2
Tso chuk	5	14	Ho	7	12	Lung kien	8	13	Seon yew	12
Tso hoo	8	15	Kew chow choygh	9	19				Seang	2
Tso kwing	7	10	Kew neung	4		Ma too	12		Se han	5 4
Tso Pak	12		Kew Ho	3		Ma wan	12		Se	3
Tsu mo	7	12	Kew kwee	5	13	Mau 5 D	9	18	Shang chong	2
Kee Shan	12		Kew quen	7	9	Mien too	3		Shang too	2
Kee Sheh	12		Kew yee	9	19	Mien tung	12		Shang tsang	4
Han	3		Ki Faon	8	15	Mong tang	4		Shang tye	4
Han she	9	19	Ho Faon	2		Muk chow	6	7	Shang wan	2
Han Tae	4								Shang tsang	4

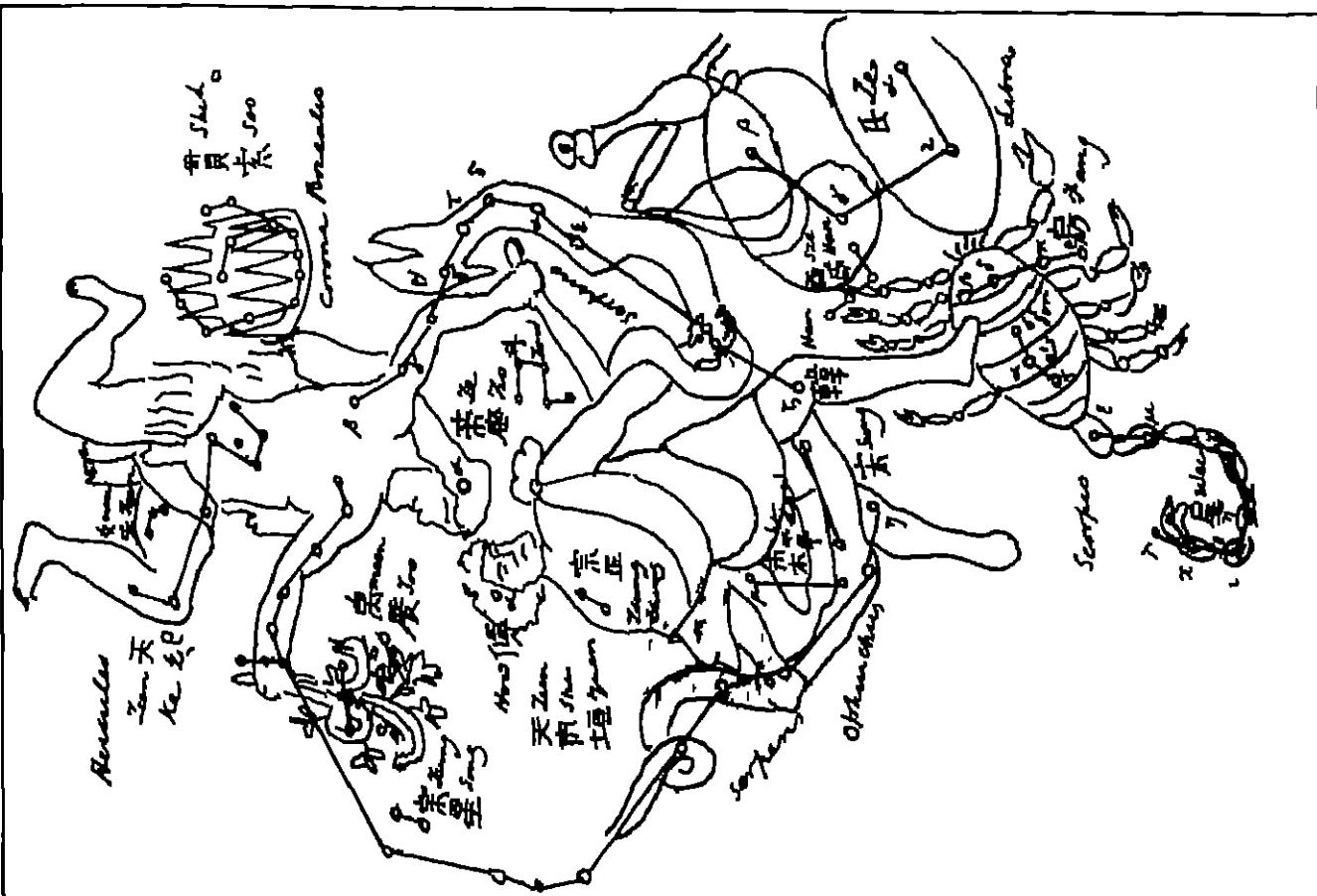
Shang Hae	2	Teen chuen	9	17	Teen Green	7	12	Tee	10	10	22
Shan choy	2	Teen chway	2		Teen Tech	10	21	Tye Seang	4		
Shan Foo	2	Teen Foo	7	9	Teen Yuen	6	8	Ty Trichy	4		
Shan Shi	11 25	Teen Shih	5	3	Teen Yuan	9	18	Tung good	11	27	
Shan See	2	Teen - Heng	5	2	Teen Yuen	9	19	Tung Hae	3		
Shan See	2	Teen Huan	8	15	Too kung	8	14	Tung Han	5	4	
Shan See	4	Teen Hway	9	19	Too See	3		4			
Shan See	11 26	Teen Hoangkate	2		Too See kung	8	15	Wae choo	10	23	
Shay Ruth	12	Teen Foo	5	3	Too See kung	11	28	Whe Ring	8	15	
Shay Shoo	12	Teen tae	2		Ton	3		Wun Chang	2		
Shay we	12	Teen tang	8	13	Tow S D	6	8	Wee	3		
She low	3	Teen taue	9	19	Wankie	9	19	Wei	7	10	
Sheh S D	8 13	Teen te	3		Wei, S D	10	21	Wei	7	10	
Sheh Tye kee	12	Teen teke or ke	6	8	Teen Tae	7	9	Wei S D	6	6	
Shen Kiong	6 6	Teen te	10	23	Teen Cheng	4		Woo chay	7	14	
Shos Tye	2	Teen teue	9	19	Teen fes	7	12	Woo chao how	14		
Shuk	3	Teen Keung	6	6	See	3		Woo chao how	14		
Shuny Foo	10 22	Teen koo	2		See Yaung	4		Woo shang Shoo	2		
Shuny Kee	12	Teen koo	10	23	Teck Ho	6	5	Woo Zi Hoo	2		
Shuny Kee	10 22	Teen koo	7	12	Teck kung	4		Woo Zi Hoo	4		
Sin S D	6 5	Teen koo -	9	17	Teck ko	6	5	Woo yee	3		
Sing S D	11 25	Teen kuan	9	19	Teck kung	3		Wei S D	7	12	
Sheh Loo	9	Teen Lang	10	22	Teck she	9	17	Wei S D	9	17	
Sun	10 22	Teen laue	2		Teck Shuny	10	23	Ya Ke	10	22	
Sung	3	Teen La	2		Teen ka	10	24	Yang mun	5	2	
Sze Kee	7 11	Teen lan	9	17	Tai	7	10	Yen	3		
Sze ta	7 11	Teen lay chung	7	11	Tek	8	15	Yen	7	10	
Sze kwei	9 20	Teen maeon	11	26	Teen	3		Yoo chik fa	4		
Sze too	2	Teen men	5	1	Teen	7	10	Yoo chow	2		
Sze Tuk	10 22	Teen o or Ho	9	18	Teen	7	10	Yoo Hee	11	28	
Sze - Wae	11 11	Teen phee	6	8	Teen kaw	10	21	Yoo tang	5	6	
Sze wing	7 11	Teen seang	11	25	Teen sas	2		Yoo ty	7	9	
Ta chow	2	Teen shi -	10	21	Too chik ha	4		Yoo tuk ta	5	2	
Ta Kee	5 1	Teen khang kum	8	16	Too Hee -	11	28	Yee Chay	4		
Ta Kee	2	Teen teen	5	7	Too kung	8	14	Yeh Song	4	4	
Ta Ling	9 17	Teen tram	9	18	Too kuh	7	9	Yeh S	7	27	
Ta Te	2	Teen Trang	2		Too kuh	9	20	Yeh S	2		
Tae	7 10	Teen tree	9	19	Too shat ha	10	24	Yeh S	6	6	
Tae She	11 25	Teen tsuk	11	25	Too	3		Yeh S	5	13	
Tae Yee	2	Teen tzuu	7	10	Too	7	10	Yeh tsuk	11	25	
Tae Yee	4	Teen tzuu	10	22	Too tsou	9	18	Yee	9	18	
Tang May	5 13	Teen tzuu	11	26	Teen tsou	3		Yeh tang	8	15	
Ta Zoo	3	Teen yeh	2		Teen tsou	3		Yeh tang	10	21	
Ta Leih	5 3	Teen yen	9	18	Teen tzuu	10	24	Yen Jee	7	11	
Ta S.D	5 3	Teen yo	6	8	Teen tzuu	4					
Teen choo	2	Teen yee	8	16	Teen S.D	9	30				

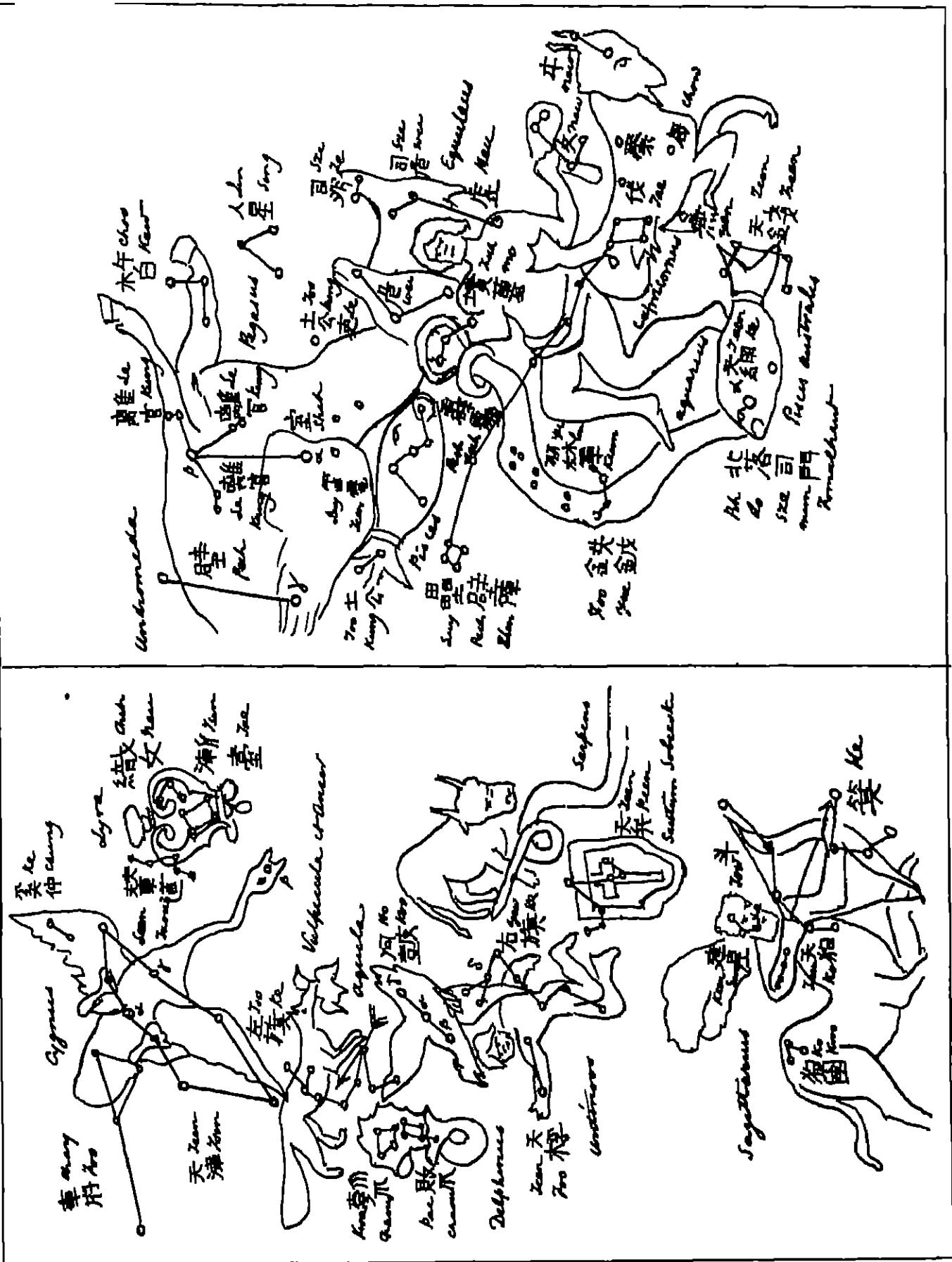
Reduced copies of the figures in Elementa will be sent the principal Chinese institutions and down on the corresponding stars

१८









B

1 丑丁 Jeng chow	21 戊壬 Siu Sze	41 未丁 Jeng Wei	61 長壬 Leng Sze
2 午壬 Un Woo	22 卯丁 Jeng Amoo	42 子壬 Un Tze	62 西丁 Jeng Yew
3 戌丁 Jeng Hie	23 申壬 Un Shun	43 巳丁 Jeng Sze	63 戌丁 Jeng Hie
4 戌壬 Un Shun	24 丑丁 Jeng Chow	44 戌壬 Un Sze	64 未丁 Jeng Wei
5 戊戌 Woo Sze	25 未癸 Woo Kui	45 戊戌 Woo Sze	65 丑癸 Woo Chow
6 夕癸 Woo Kui	26 子戊 Woo Tze	46 西癸 Woo Kui	66 午癸 Woo Kui
7 申戌 Woo Shun	27 巳癸 Woo Sze	47 黃戊 Woo Yen	67 黃癸 Woo Kui
8 丑癸 Woo Choo	28 戌戌 Woo Sze	48 未癸 Woo Kui	68 未癸 Woo Shun
9 未巳 Kei Wei	29 戌甲 Kei Shun	49 丑巳 Kei Chow	69 戌甲 Kei Sze
10 于甲 Kei Tze	30 西巳 Kei Yew	50 午甲 Kei Koo	70 夕巳 Kei Amoo
11 巳巳 Kei Sze	31 寅甲 Kei Yim	51 亥巳 Kei Hie	71 申甲 Kei Shun
12 戌甲 Kei Sze	32 未巳 Kei Hie	52 戌甲 Kei Shun	72 丑巳 Kei Amoo
13 民庚 Kang Shin	33 丑乙 Yih Chow	53 戊庚 Kang Sze	73 未乙 Yih Wei
14 西乙 Yih Yew	34 午庚 Kang Hoo	54 夕乙 Yih Amoo	74 于庚 Kang Tze
15 寅庚 Kang Yim	35 亥乙 Yih Hie	55 中庚 Kang Shun	75 巳乙 Yih Sze
16 未乙 Yih Wei	36 民庚 Kang Shin	56 丑乙 Yih Chow	76 戌庚 Kang Sze
17 丑辛 Siu Chow	37 戌丙 Ping Sze	57 未辛 Siu Wei	77 民丙 Ping Shin
18 牛丙 Ping Woo	38 夕辛 Siu Amoo	58 于丙 Ping Tze	78 西辛 Siu Yew
19 辛卯 Siu Hie	39 申丙 Ping Shun	59 巳辛 Siu Sze	79 寅丙 Ping Yim
20 艮丙 Ping Shin	40 丑辛 Siu Chow	60 戌丙 Ping Sze	80 未辛 Siu Wei
			81 丑丁 Jeng Chow

The 80-year Table for finding the Characters for the 1st of January in any year B.C. and

The Kee Tze Characters

癸	壬	辛	庚	己	戊	丁	丙	乙	甲
Kwei	In	Sin	Keng	He	Woo	Tung	Ping	Ih	Kee
亥	戌	酉	申	未	午	巳	辰	卯	子
Hai	Siu	Sau	Shin	Was	Woo	Sze	Shon	Mow	Zon

1

The Combinations of the Kee Tze Characters forming the Cycle of Sixty years or the periods of thirty days

51 庚甲 Keng Jia	41 艮甲 Kee Shin	31 午甲 Hao Hwo	21 申甲 Kee Shon	11 戌甲 Kee Sien	1 子甲 Kee Jiong
52 卯乙 Yih Maan	42 巳乙 Yih Sze	32 未乙 Yih Wei	22 酉乙 Yih Jiong	12 亥乙 Yih Hae	2 丑乙 Yih Chow
53 辰丙 Ping Shin	43 午丙 Ping Sze	33 申丙 Ping Shon	23 戌丙 Ping Sien	13 子丙 Ping Jiong	3 寅丙 Ping Jiong
54 巳丁 Tung Sze	44 未丁 Tung Sze	34 酉丁 Tung Jiong	24 亥丁 Tung Hae	14 丑丁 Tung Chon	4 卯丁 Tung Maan
55 午戊 Woo Hwo	45 申戊 Woo Shin	35 皮戊 Woo Sien	25 子戊 Woo Shie	15 寅戊 Woo Jiong	5 辰戊 Woo Chon
56 未己 Ke Hae	46 酉己 Kee Sze	36 亥己 Ke Hae	26 丑己 Ke Hien	16 卯己 Ke Hae	6 巳己 Ke Sze
57 申庚 Keng Shon	47 戌庚 Keng Sien	37 午庚 Keng Jiong	27 寅庚 Keng Jiong	17 辰庚 Keng Shon	7 午庚 Keng Jiong
58 酉辛 Sin Sze	48 亥辛 Sin Hae	38 丑辛 Sin Chon	28 卯辛 Sin Hien	18 巳辛 Sin Sze	8 未辛 Sin Hae
59 戌壬 In Tze	49 子壬 In Hae	39 寅壬 In Jiong	29 辰壬 In Shon	19 午壬 In Hwo	9 申壬 In Shon
60 亥癸 Kwei Hae	50 丑癸 Kwei Chon	40 卯癸 Kwei Hien	30 巳癸 Kwei Sze	20 未癸 Kwei Hae	10 酉癸 Kwei Jiong

C

The first year of each Cycle of 60 years, from BC 2637 to AD 1864

I	2637	XIV	1857	XXVII	1077	XL	297	LIII	484	LXVI	1264
II	2577	XV	1797	XXVIII	1017	XLI	237	LIV	564	LXVII	1324
III	2517	XVI	1737	XXIX	957	XLII	177	V	604	LXVIII	1384
IV	2457	XVII	1677	XXX	897	XLIII	117	LVI	664	LXIX	1444
V	2397	XVIII	1617	XXXI	837	XLIV	57	LXII	724	LXX	1504
VI	2337	XIX	1557	XXXII	777	XLV	47	LXIII	784	LXXI	1564
VII	2277	XX	1497	XXXIII	717	XLVI	64	LIX	844	LXXII	1624
VIII	2217	XXI	1437	XXXIV	657	XLVII	124	LX	904	LXXXI	1684
IX	2157	XXII	1377	XXXV	597	XLVIII	184	LXI	964	LXXXII	1744
X	2097	XXIII	1317	XXXVI	537	XLIX	244	LXII	1024	LXXXV	1804
XI	2037	XXIV	1257	XXXVII	477	L	304	LXIII	1084	LXXXVI	1864
XII	1977	XXV	1197	XXXVIII	417	L1	364	LXIV	1144		
XIII	1917	XXVI	1137	XXXIX	357	LII	424	LXV	1204		

D

The commencement of each Period of 80 years from BC 2561

BC	2561	2081	1601	1221	841	461	81	AD	80	480	880	1280	1680
	2401	2001	1601	1201	801	401	1	160	560	960	1360	1760	
	2321	1921	1521	1121	721	321		240	640	1040	1440	1840	
	2241	1841	1441	1041	641	241		320	720	1120	1520	1920	
	2161	1761	1361	961	561	161		400	800	1200	1600	2000	

E

The days on which the Characters for January 1st occur

Common Years	Leap years
March 2	March 1
May 1	April 30
June 30	June 29
August 29	August 28
October 28	October 27
December 27	December 26

F

The first year of each cycle of 19 years from BC 649 to AD 1950

BC	649	229	89	183	325	573	703	893	1083	1273	1463	1653	1843
	609	210	20	152	342	582	722	912	1102	1292	1482	1672	1862
	590	381	1	171	361	581	791	931	1121	1311	1501	1691	1881
	571	362	172	AD	190	380	570	760	950	1140	1330	1520	1710
	552	343	153	19	209	339	589	779	969	1159	1349	1539	1729
	533	324	134	38	228	418	608	798	988	1178	1368	1558	1748
	515	305	115	67	247	407	627	817	1007	1197	1387	1577	1767
	496	286	96	76	266	456	646	836	1026	1216	1406	1596	1786
	477	267	77	95	285	475	665	855	1045	1235	1425	1615	1805
	458	248	58	114	304	494	684	874	1064	1254	1444	1634	1824

G.

Approximate Table of the first day of each moon for
every year of the Lunar Cycle of 19 years

1	Jan 23	Feb 21	Mar 23	Apr 21	May 19	June 10	July 19	Aug 17	Sept 16	Oct 15	Nov 14	Dec 10	
2	Jan 12	Feb 10	Mar 11	Apr 10	May 10	June 8	July 8	Aug 6	Sept 5	Oct 3	Nov 3	Dec 2	
3	Jan 1	Feb 1	Mar 1	Apr 1	May 29	June 29	July 27	Aug 25	Sept 24	Oct 23	Nov 22	Dec 21	
4	Jan 20	Feb 18	Mar 20	Apr 18	May 18	June 16	July 16	Aug 14	Sept 13	Oct 12	Nov 11	Dec 10	
5	Jan 9	Feb 7	Mar 9	Apr 7	May 7	June 6	July 5	Aug 3	Sept 2	Oct 2	Nov 31	Dec 30	
6	Jan 28	Feb 26	Mar 28	Apr 26	May 26	June 24	July 24	Aug 22	Sept 21	Oct 20	Nov 19	Dec 18	
7	Jan 17	Feb 15	Mar 17	Apr 15	May 15	June 13	July 12	Aug 11	Sept 10	Oct 9	Nov 8	Dec 7	
8	Jan 6	Feb 4	Mar 6	Apr 4	May 4	June 3	July 2	Aug 1	Sept 30	Oct 29	Nov 28	Dec 27	
9	Jan 25	Feb 23	Mar 25	Apr 23	May 23	June 21	July 21	Aug 19	Sept 18	Oct 17	Nov 16	Dec 15	
10	Jan 14	Feb 11	Mar 14	Apr 10	May 12	June 10	July 10	Aug 8	Sept 7	Oct 6	Nov 5	Dec 4	
11	Jan 3	Feb 1	Mar 3	Apr 1	May 1	June 29	July 29	Aug 27	Sept 27	Oct 26	Nov 25	Dec 24	
12	Jan 22	Feb 20	Mar 22	Apr 20	May 20	June 18	July 18	Aug 16	Sept 15	Oct 14	Nov 13	Dec 12	
13	Jan 11	Feb 9	Mar 11	Apr 9	May 9	June 7	July 7	Aug 5	Sept 4	Oct 3	Nov 2	Dec 1	
14	Jan 30	Feb 28	Mar 30	Apr 28	May 28	June 26	July 26	Aug 24	Sept 23	Oct 22	Nov 21	Dec 20	
15	Jan 19	Feb 17	Mar 19	Apr 17	May 17	June 15	July 15	Aug 13	Sept 12	Oct 11	Nov 10	Dec 9	
16	Jan 8	Feb 6	Mar 8	Apr 6	May 6	June 4	July 4	Aug 2	Sept 1	Oct 1	Nov 30	Dec 29	
17	Jan 27	Feb 25	Mar 27	Apr 25	May 25	June 23	July 23	Aug 21	Sept 20	Oct 19	Nov 18	Dec 17	
18	Jan 16	Feb 14	Mar 16	Apr 14	May 14	June 12	July 12	Aug 10	Sept 9	Oct 8	Nov 7	Dec 6	
19	Jan 5	Feb 3	Mar 5	Apr 4	May 3	June 2	July 1	Aug 30	Sept 29	Oct 28	Nov 26	Dec 25	

H

The Twenty-four divisions of the Chinese Year

小寒	Snow Hen	mild winter (old)	Jan 6	小暑	heat Show	moderate heat	July 8
大立	Ta Shoo	great cold	" 21	大立	Ta Shoo	great heat	" 21
立春	Kao Chin	spring begins	Feb 5	立春	Kao Chin	autumn begins	Aug 9
雨水	Tsu Shoo	rain water	" 21	雨水	Tsu Shoo	autumn heat	" 24
惊蛰	Kung choh	worms move	Mar 6	惊蛰	Kung choh	white dew	Sep 9
春分	Chen Chin	spring middle	Mar 21	春分	Chen Chin	autumn middle	" 22
清明	Yung chin	pure brightness	Apr 6	清明	Yung chin	cold dew	Oct 9
谷雨	Kuk yoo	grain rain	" 21	谷雨	Kuk yoo	heat frost	" 21
立夏	Kao Haar	summer begins	May 7	立夏	Kao Haar	autumn begins	Nov 8
小满	Less Haar	a little full	" 22	小满	Less Haar	autumn snow	" 23
芒种	Less Chin	green in the fur	June 7	芒种	Less Chin	green snow	Dec 8
大暑	Han che	summer night	" 22	大暑	Han che	winter middle	" 22

The Twelve Signs or divisions of the Ecliptic according to our Zodical Signs
ancient中國名 Chung kung ming
Chinese names西國名 Sa kwo ming
European names

降大司馬	Heang leong	The Great Bridge	羊	Peh Yang	The white sheep
大司馬	Ta Leong		牛	Kin ouen	The golden ox
少皞	Shih chien		金	jen yang	The two Ringers
蓐鳥	Shun Shoo	The Snail's Head	犬	Kao sea	The dog
鳩鳥	Shun Ho	The Snail's Head	目	see kie	The lion
鳩鳥	Shun Wei	The Snail's Tail	口	shoo yang weu	The tiger
大火	Shoo Sing	The star of longevity	子	Keen aching	The rapid motion
大木	Ta Mo	The great tree	女	Keen idle	The celestial Balance
木星	mo moek	The Major Tree	人	Leu ma	The celestial Dragon
紀元	Sing ke	Major Standard	火	mo ke	The man horse
元	guan yuen		蟲	mo his	A kind of Sheep or goat
歲	Ho		金	shoo yang	The human tree
			魚	shoo yu	The two turtles

The translation of some of the Chinese terms is so unsatisfactory that it is difficult to be certain whether the term is correctly written in my dictionary refers to them simply as the names of certain stars or constellations without attempting to identify them.